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OFFICIAL AQUATIC GUIDE

with

Official Rules for Intramural, Interscholastic,
Intercollegiate and Telegraphic
Swimming Meets

National Intercollegiate Telegraphic
Swimming Meet Section

1938-1939

Editor

FRANCES A. GREENWOOD
University of Alabama
University, Ala.



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Association for Health, Physical Education and Recreation

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Conferences Sponsored by the Aquatic Committee

1937-1938

SWIMMING INSTITUTE FOR WOMEN

Northwestern University, Evanston, Ill., October 8, 1938. Sponsors: Katharine Whitney Curtis, Chicago Teachers College, Chicago, Ill., and Jacqueline Thompson, Northwestern University.

Program

Morning

Diving.

Breast Stroke Analysis—Tom Robinson, Northwestern University.

Swimming for the Handicapped Child—Victoria B. Vacha, Spalding School.

Back Crawl Analysis—Ann Avery Smith, Wayne University.

Front Crawl Analysis—Jacqueline Thompson, Northwestern University.

Synchronized Swimming—Katharine Whitney Curtis, Chicago Teachers College.

Afternoon

Swimming Our Way Around the World—Marion Mansfield, Northwestern University; Eileen Scanlon, Mundelein College; and Claudia Eckert, Wilmette Public Schools.

Swimming and Its Effect on Posture—Elizabeth Abbott, Northwestern University.

The Revised American Red Cross Water Safety Program—D. Melville Carr, Director of First Aid and Water Safety, Chicago Chapter.

Swimming and Diving Pictures.

NORTHWEST DISTRICT SWIMMING CONFERENCE

Spokane, Wash., April 4, 1938. Sponsor: Natalie Reichart, Oregon State College, Corvallis, Ore.

Program

Testing and Classification of Swimmers—Margaret Neylue, University of Idaho.

Physiological Dangers of Swimming—Dr. Elizabeth B. White, Spokane, Wash.

Discussion of Swimming Techniques:

- a. The Elementary Backstrokes and Their Place in the Program—Jeanette Brauns, Oregon State College.
- b. The Crawl and Its Place in the Program—Elsa Pinkham, North Central High School, Spokane, Wash.
- c. The Side Stroke and Its Place in the Program—Evelyn Hasenmeyer, Reed College, Portland, Ore.
- d. The Racing Back Stroke and Its Place in the Program.
- e. Diving and Its Place in the Program—Warren Eastburn, University of Oregon.

The Application of "Conscious Control" to the Teaching of Swimming and Diving—Lois Carrell, Washington State College.
 Questions and Answers—an Open Forum, under a Discussion Leader, for the Purpose of Raising Questions Which Do Not Fall under Above Headings.

NEW ENGLAND SWIMMING CONFERENCE FOR WOMEN

Smith College, Northampton, Mass., March 11 and 12, 1938. Sponsor: Gertrude Goss, Smith College.

Program

Friday Evening

Swimming Meet Judged by Boston Board of Officials Followed by Demonstration of Formations by Smith Students.

Saturday Morning

Methods of Teaching the Crawl to a Group—Helen Little, Central Branch Y.W.C.A., New York City.

Progressions in Teaching Diving—Nita Sheffield.

Racing Starts and Turns—Mrs. Ione Muir.

The Butterfly Breast Stroke—Mrs. Elizabeth Yeend Meyers.

The Kieffer Back Stroke—Irene Lambert.

Diving—From the Judges' Point of View—Ethel McGary.

Studies and Research Projects

Each member of the committee has chosen a subject which she is developing as scientifically as possible. Important material relative to it is being collected, and research or careful study is being done. We hope to have reports available at the end of each year. The cooperation of all persons interested in this work will be welcomed. Please write the person developing the project in which you are most interested.

Back Crawl—Claire Redfield

Breast Stroke—Pauline Spencer

Methods of Teaching Diving—Jacqueline Thompson

Methods of Teaching Swimming—Ernestine Troemel

Pool Sanitation and Regulations—Natalie Reichart

Rating of Officials—Lois Carrell, Katherine Culbert, Harriet Graham

Recreational Swimming—Katharine Whitney Curtis and Gertrude Goss

Sinus Difficulty and Its Relation to Swimming and Diving—Grace B.

Daviess

Swimming Performance—Elizabeth Law Hazlett

1. An evaluation of form in swimming performance, an objective means.
2. Relation of stature to swimming performance.

Swimming Programs (for schools, colleges, camps, clubs)—Jean Adamson

Question-Answer Service

Explanation

This project has been begun because of the increasing number of requests received by various persons for information on swimming, diving, pool sanitation, pool construction, and related subjects. We hope to provide authoritative replies and helpful information for all who wish it.

Procedure

Briefly, our plan is to refer questions to a member of the Question-Answer Board who is an authority on the particular subject involved. All questions should be sent to the Chairman, who forwards them to a member of the Board. This Board member states his or her answer and returns it to the Chairman, by whom it is returned to the person who asked the question. Questions should be stated as concisely as possible, using a separate blank for each. Blanks have been distributed in all states. Official blanks are not necessary for your questions. Please use the form indicated below.

(Question)

(Name of asker)

(Address)

(Referred to)

(Date)

Board

The Question-Answer Board is composed of authorities on swimming, diving, pool sanitation, pool construction, and related subjects.

Mr. Harry Ackley
Mr. David A. Armbruster
Mr. Ernst Brandsten
Miss Marjorie Camp
Mr. Norman Cox
Miss Gertrude Goss
Mr. L. de B. Handley
Mr. J. J. Hinman, Jr.
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Mr. Peter Karpovich
Mr. Edward T. Kennedy
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Mr. Matt Mann

Mr. Thomas K. Cureton, Jr.
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Miss Grace Daviess
Mr. Harold Enlows
Mr. Al Gordon
Miss Marjorie Mayer
Miss Olive McCormick
Captain Fred Mills
Dr. Hamilton Montgomery
Mr. George Mosley
Mr. Alfred A. Neuschaefer
Miss Nita C. Sheffield
Miss Ann Avery Smith

Send all questions to Frances A. Greenwood, University, Alabama.

Official Rules for Intramural, Interscholastic, Inter-Collegiate and Telegraphic Swimming Meets

1938-1939

RULE I. EVENTS AND NATIONAL RECORDS

Official Events

Sec. 1. Events recommended for Intramural, Interscholastic and Inter-collegiate Telegraphic competition are listed below (those marked "T" are the official Telegraphic events):

<i>75-foot pools</i>	<i>60-foot pools</i>
Free style, back stroke and breast stroke	Free style, back stroke and breast stroke
25 yards	20 yards
40 yards "T"	40 yards "T"
50 yards	100 yards "T"
100 yards "T"	60-yard medley relay "T"
75-yard medley relay "T"	(1st swimmer, 20 yards back;
(1st swimmer, 25 yards back;	2nd, 20 yards breast; 3rd, 20
2nd, 25 yards breast; 3rd, 25	yards crawl)
yards crawl)	50-yard free style relay "T"
100-yard free style relay "T"	(4 swimmers, 20 yards each)
(4 swimmers, 25 yards each)	

Records

Sec. 2. Two sets of records will be registered, those made in National Intercollegiate Telegraphic competition, and those made in Intramural, Interscholastic, and Intercollegiate competition. All meets in which records are made must be conducted in strict accordance with the official rules.

Sec. 3. All records must be made in Intramural, Interscholastic, Inter-collegiate or Telegraphic meets open to spectators. Under no conditions may closed time trials be submitted. No records may be made in special or A.A.U. meets.

Sec. 4. To be accepted as a record, the performance must be achieved in a race started by a pistol shot.

Sec. 5. In events where the finish of a race is not the end of the tank, a rope or pole shall be supported in tension at the finish mark sufficiently high above the water to permit contestants to swim under it without interfering with it. The race shall be finished for a contestant when any part of her person glides under the rope or pole.

Sec. 6. Intercollegiate Telegraphic Records are taken from the official result blanks. Applications for intramural, interscholastic, and inter-collegiate records must be made on the blank prescribed in the current issue of the AQUATIC GUIDE, and sent to the Chairman of Records of the National Aquatic Committee within 10 days of the performance.

Sec. 7. The signatures of at least three timers and the time registered on each watch must be sent. Official timing rules must have been followed. (See TIMERS, Rule II, Sec. 4.)

Sec. 8. Official times for events swum in pools measuring less than 75 feet but more than 60 feet may be recorded for the 20-yard and 40-yard events only.

Sec. 9. Official times for events swum in pools measuring more than 75 feet may be recorded for the 25-yard, 40-yard and 100-yard events, using a rope finish in each event.

Sec. 10. Colleges having pools not measuring exactly 60 feet or 75 feet may not record official times for the relays.

Sec. 11. A certificate of pool length stating the exact measurement in feet, inches, and fractions of an inch, and signed by an engineer or surveyor, must be on file before a record can be awarded.

Sec. 12. All women students legitimately enrolled in their college or university and studying full time should be permitted to swim for their School or in Intramural competition.

Sec. 13. The take-off must be flat and parallel to the surface of the water. It should not be more than 18 inches above the level of the water.

RULE II. DUTIES OF OFFICIALS

Officials

Sec. 1. The officials shall be one referee, one fancy diving referee, one clerk of course, one scorer, three finish judges, three, five or seven judges of fancy diving, three timers, a starter, an announcer, and an inspector of turns and lanes.

Referee

Sec. 2. The referee shall have full jurisdiction over the meet and she shall see that all the rules are enforced.

She shall have received the names of entries for each event before the meet begins. No substitutions shall be allowed for any competitor after the swimmers have been lined up for the event. The referee shall give the names of all entries for each event to the clerk of course.

She shall assign to each judge her particular duty deciding the winner, second, third, fourth, etc., as the case may require.

She shall act as chief judge, assisting in picking the winner of first place in every race.

The referee shall decide conflicting decisions between the judges, and shall promptly give her official decision to the scorer and announcer.

She shall appoint a chief timer. (See Duties of Timers.)

She shall appoint take-off judges for each relay. The referee shall instruct each take-off judge to station herself in such position that she can hold her finger on the foot of each starter (after the first one) and at the same time see the end of the pool, for she shall judge whether the starter leaves her position before the preceding swimmer touches the end. The penalty for illegal starting shall be disqualification.

The referee shall instruct all other officials regarding their duties as covered by the rules.

Judges

Sec. 3. The judges at finish shall determine the order in which the contestants finish.

The duties of the judges of fancy diving are fully explained in Rule IX.

Timekeepers and Alternates

Sec. 4. Three timekeepers shall act officially. If two or more of the watches agree, their time shall be official time; if all three disagree, middle time shall be official time.

Any number of alternates may be appointed, however, that their times may be taken in case one or more of the official timekeepers fail to catch the performance. Alternates shall be named in a definite order and called upon in said order if circumstances require.

Sec. 5. The chief timer shall instruct each timer to start his watch instantly on the flash of the starter's pistol and to stop his watch simultaneously with the finish of the winner of first place.

The chief timer shall read all watches and after the official decision has been reached, announce the official time of each heat or race.

Before the meet, the chief timer shall examine the watches and see that they are properly wound. All watches used should have been synchronized within two weeks by a reliable jeweler. All watches shall indicate tenths or fifths of seconds.

Clerk of Course

Sec. 6. The clerk of course shall be provided with the names of all competitors for each event.

At least five minutes before the event shall be started she must give them notice to appear at the starting mark.

In meets where more than two teams are competing, the clerk of course shall have the contestants draw by lot for starting positions, after which they shall be turned over to the starter. The clerk of course shall be responsible for placing the contestants on the starting mark at the proper time for each event.

Starter

Sec. 7. The starter shall have entire control of the competitors after they have been assigned to their proper positions by the clerk of course.

After receiving a signal from the referee that the judges and timers are ready, she shall start the race according to Rule V.

The starter must have at least three good cartridges in her pistol before starting a race. A snap cap or accidental shot shall be no start.

In case the pistol is not properly discharged all competitors shall be called back at once by the starter firing a pistol shot.

When the pistol is properly discharged and any competitor or competitors shall have obtained an unfair advantage at the start, all competitors shall be called back at once by the starter firing a pistol shot.

and the starter shall indicate the competitor or competitors who shall be charged with a false start.

Scorers

Sec. 8. The scorer shall keep an accurate record of the results of each event and shall act as auditor of the fancy diving scores.

Inspector of Turns and Lanes

Sec. 9. The inspector of turns and lanes shall report to the referee any infraction of the rules and any violation of Rule VI.

RULE III. CONTESTANTS

Number

Sec. 1. In dual intercollegiate meets the number of contestants for each event shall be limited to two for each team, with the exception of the relay races. For the free style relay, four swimmers shall comprise a team, each swimming an equal distance. For the medley relay, three swimmers shall comprise a team, each swimming one-third the distance, the first with back stroke, the second with breast stroke, and the third with free style.

Sec. 2. In all intramural or group meets the number of contestants is decided by those in charge.

In group meets where heats are necessary there should be at least five contestants to qualify for all final events except the diving. In the diving, six should qualify.

Sec. 3. No contestant shall participate in more than three different events in a swimming meet. Three events shall be interpreted as any three events on the program with the exception of the water game.

In the Telegraphic meet no contestant may enter more than three events and the relays considering both meets.

Sec. 4. No swimmer may swim more than one lap of any relay.

RULE IV. SCORING OF POINTS

Sec. 1. It is recommended that places in meets be scored as follows:

Dual Meets

a. In the free style relay race:

First place	8 points
Second place	3 points

b. In the medley relay race:

First place	6 points
Second place	3 points

c. In all other events:

First place	5 points
Second place	3 points
Third place	1 point

Group Meets**a. In the relay races, both free style and medley:**

First place	10 points
Second place	8 points
Third place	6 points
Fourth place	4 points
Fifth place	2 points

b. In all other events:

First place	6 points
Second place	4 points
Third place	3 points
Fourth place	2 points
Fifth place	1 point

Telegraphic Meets**Points for all events including relays:**

First place	5 points
Second place	4 points
Third place	3 points
Fourth place	2 points
Fifth place	1 point

Sec. 2. The team having the greatest number of points shall be declared the winner of the swimming meet.

Sec. 3. It is recommended that an attractive scoreboard of suitable size be placed so that it can be seen by spectators and contestants and that it be kept accurately for all meets.

RULE V. OFFICIAL START

Sec. 1. In all swimming races with the exception of the back stroke, the contestants shall be behind their starting stations and upon the signal

1. "Get on your marks"

shall step to the starting mark and assume any starting position, provided they hold a steady balance for an appreciable length of time. When the starter is assured the swimmers are steady she starts the race with a

2. Pistol shot.

Sec. 2. Any competitor leaving her mark before the pistol has been discharged shall be charged with a false start. Three false starts by any contestant shall disqualify her; this shall also apply to relay races. No substitution shall be allowed for such disqualified competitor.

RULE VI. FOULS**Competing Course**

Sec. 1. Each competitor shall keep a straight course, parallel with the sides of the pool, throughout the race. Any contestant who, when

out of her course, shall touch another competitor, is liable to disqualification from the event, subject to the discretion of the referee. The referee may order any race swum over if she thinks sufficient unfairness prevailed.

Walking in Shallow Water

Sec. 2. Standing upon the bottom in the shallow end of a pool during a competition is allowed only for the purpose of resting. Walking on or jumping from the bottom in the shallow end shall disqualify the offender.

Turning

Sec. 3. On the turn in all free style events disqualification results if a competitor fails to touch the end of the pool or course with one or both hands before pushing off.

Finish of Race

Sec. 4. In all swimming races each competitor shall have finished the race when any part of her person touches the finish mark, or when any part of her person glides under a rope or pole used to mark the finish.

RULE VII. BREAST STROKE

Sec. 1. Both hands must be moved forward together and drawn backwards simultaneously. The body must be kept perfectly on the breast, the shoulders in a plane parallel with the surface of the water. The shoulders must at all times be at right angles to the line of forward progress.

Sec. 2. The legs must be drawn up with a distinct bend in the knees, followed by kicking outward and backward with a separation of the legs laterally. Up and down movements of the legs in the vertical plane are prohibited.

Sec. 3. When touching at the turn, or in finishing a race, the touch must be made with both hands simultaneously. In executing a turn there shall be no anticipation of this movement, as the form of the breast stroke outlined in Sec. 1 must be observed until the touch has actually been made, and the push-off shall be made in no other position than on the breast.

Sec. 4. Any competitor introducing a side-stroke movement is to be disqualified. Note.—In the recovery, the legs shall be drawn up relaxed and natural, both knees as nearly as possible on the same plane. The drive or thrust must be made simultaneously, both legs executing the same type of drive or thrust. Under no consideration shall one leg execute one type of drive or thrust while the other leg executes another type. Not keeping the shoulders level, hunching one in front of the other, extending one hand out for turn or finish, engaging the water with the instep of one foot and the sole of the other, anticipation of the turn, all these are indications of improper form and the user thereof shall be disqualified.

RULE VIII. BACK STROKE

Start

The competitors shall line up in the water facing the starting mark, with both hands resting on the end of the pool. At the sound of the pistol the competitors shall push off on their backs and continue swimming on their backs throughout the race.

Turn

Any competitor turning over on his breast before his foremost hand has touched the end of the course for the purpose of turning or finishing shall be disqualified.

RULE IX. DIVING RULES

A—General Rules. B—Methods of Marking, Duties of Referee, Judges and Secretary. C—Execution of the Dive. D—Special Regulations

A. General Rules

1. In all group meets and in dual intramural meets the order of starting shall be decided by lot. In dual intercollegiate meets the visiting team shall have the choice.

2. If necessary, the competitors shall be divided into groups, each group consisting of a number of competitors determined by the officials. The six highest scores shall qualify the competitors for the finals.

3. Before each dive the announcer shall announce the name of the competitor and the name of the dive she is about to execute.

4. The competitor shall be given sufficient time for preparation and execution of the dive.

5. Only such dives as are mentioned in the table, or those agreed upon by teams and officials before the meet, may be executed. Dives added by mutual agreement receive the number of points obtained by official treatment of judges' awards unless a degree of difficulty rating is agreed upon also. Dives added to the official list in this manner apply only to the meet for which they are added.

6. A written record of the voluntary dives selected must be presented for each competitor before the meet begins.

7. None of the compulsory dives may be repeated as a voluntary dive. All dives of the same number are to be considered as the same dive.

8. All official dives must be executed by the competitors themselves, without assistance from another person.

9. A second attempt is permissible only under circumstances which in the opinion of the referee are exceptional. In the event of a diver making a balk or false start on the springboard and not completing a dive which she has started, the diving referee shall have full power to decide whether the balk was caused by interference, noise, or other circumstance which in her opinion prevented the diver from completing the dive, and the decision of the diving referee shall be final.

TABLE FOR SCORING DIFFICULTY OF DIVES

First column—*Judge's* possible estimate of value of a given dive on basis of points or half points, ten points being given for a perfect dive (see Rule IX). Succeeding columns contain *final results* of dives after judges' estimate has been multiplied by the proper *factor for difficulty*. The various difficulty ratings (see Rule IX) appear in bold face type at top of each column of *final results*, in the table below.

Judge's Award	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
1.	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
1.5	1.65	1.8	1.95	2.1	2.25	2.4	2.55	2.7	2.85	3.	3.15	3.3	3.45	3.6	3.75
2.	2.2	2.4	2.6	2.8	3.	3.2	3.4	3.6	3.8	4.	4.2	4.4	4.6	4.8	5.
2.5	2.75	3.	3.25	3.5	3.75	4.	4.25	4.5	4.75	5.	5.25	5.5	5.75	6.	6.25
3.	3.3	3.6	3.9	4.2	4.5	4.8	5.1	5.4	5.7	6.	6.3	6.6	6.9	7.2	7.5
3.5	3.85	4.2	4.55	4.9	5.25	5.6	5.95	6.3	6.65	7.	7.35	7.7	8.05	8.40	8.75
4.	4.4	4.8	5.2	5.6	6.	6.4	6.8	7.2	7.6	8.	8.4	8.8	9.2	9.6	10.
4.5	4.95	5.4	5.85	6.3	6.75	7.2	7.65	8.1	8.55	9.	9.45	9.9	10.35	10.8	11.25
5.	5.5	6.	6.5	7.	7.5	8.	8.5	9.	9.5	10.	10.5	11.	11.5	12.	12.5
5.5	6.05	6.6	7.15	7.7	8.25	8.8	9.35	9.9	10.45	11.	11.55	12.1	12.65	13.2	13.75
6.	6.6	7.2	7.8	8.4	9.	9.6	10.2	10.8	11.4	12.	12.6	13.2	13.8	14.4	15.
6.5	7.15	7.8	8.45	9.1	9.75	10.4	11.05	11.7	12.35	13.	13.65	14.3	14.95	15.6	16.25
7.	7.7	8.4	9.1	9.8	10.5	11.2	11.9	12.6	13.3	14.	14.7	15.4	16.1	16.8	17.5
7.5	8.25	9.	9.75	10.5	11.25	12.	12.75	13.5	14.25	15.	15.75	16.5	17.25	18.	18.75
8.	8.8	9.6	10.4	11.2	12.	12.8	13.6	14.4	15.2	16.	16.8	17.6	18.4	19.2	20.
8.5	9.35	10.2	11.05	11.9	12.75	13.6	14.45	15.3	16.15	17.	17.85	18.7	19.55	20.4	21.25
9.	9.9	10.8	11.7	12.6	13.5	14.4	15.3	16.2	17.1	18.	18.9	19.8	20.7	21.6	22.5
9.5	10.45	11.4	12.35	13.3	14.25	15.2	16.15	17.1	18.05	19.	19.95	20.09	21.85	22.8	23.75
10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.

Example: If a judge awards 7.5 for a 2.3 dive the result, 17.25, is found at a glance

B. Methods of Marking, Duties of Referee, Judges and Secretary

1. For each group contest there shall be a referee, not fewer than three nor more than seven judges, a secretary, and an announcer.

2. The referee shall manage the competition and insure that all regulations are observed.

3. The judges shall be placed by the referee apart from each other, and preferably on both sides of the diving board, if practicable.

4. After each dive, on a signal from the referee, each of the judges, without communicating with each other, shall immediately and simultaneously flash her award.

5. When five or seven judges are used, the referee shall place the individual awards one by one in the same consecutive order on a score sheet, cancel the highest and lowest awards, and pass the score sheet to the secretary. When three judges are used, there shall be no cancellation of awards.

6. The secretary shall state the average value of the remaining awards, multiply it by the degree of difficulty, and enter the points thus established as the result into the list of results.

7. The final result shall be obtained from the list of results and entered in the main minutes immediately.

8. At the end of the contest the referee shall examine critically the score sheets and the list of results in collaboration with the secretary, and confirm the final result by her signature in the main minutes.

9. The winner shall be the competitor who has obtained the greatest sum of points. If two or more competitors obtained the same number of points, the greatest sum of points awarded for compulsory dives shall decide. If there still be any dead heats, the award for the compulsory dive with the highest degree of difficulty shall decide.

10. Points shall be awarded from 0—10, according to the opinion of the judges and the following table. One-half point scale is recommended.

Completely failed	0 points
Unsatisfactory	1 through 2½ points
Deficient	3 through 4½ points
Satisfactory	5 through 6½ points
Good	7 through 8½ points
Very good	9 through 10 points

C. Execution of the Dive

1. Dives must be executed and judged on the following principles:

(a) The approach to starting position shall not be taken into consideration. The starting position of a running dive shall be assumed when the competitor is set to take the first step of the run. The starting position of a standing dive shall be assumed when the competitor stands on the front end of the board.

(b) The starting position on running dives shall be straight, head erect, feet together, and arms at sides. On standing dives the arms are to be extended forward, level with, and the width of, the shoulders apart.

(c) The run shall be smooth, straight and forceful, and shall comprise not less than three steps before the hurdle.

(d) The take-off shall be bold and confident. In running dives the take-off must be from both feet simultaneously.

(e) During the passage through the air the body can be carried straight, with pike, or with tuck.

When executing a dive straight, the body shall not be bent at the knees or at the hips. The arms must be straight, the feet together, toes pointed.

In the pike, the body shall be bent at the hips, but the legs must be kept straight at the knees, toes pointed.

In the tuck, the whole body is bunched up, the hands clasping the shins, the knees together, toes pointed. The tuck should be as compact as possible.

(f) In all dives the diver should gain the maximum amount of height, and execute the somersault dives with as much speed and precision as possible. In the plain dives with one-half and full twists, the twisting must not be done directly from the board. In all jack-knife dives with twists, the twist must not be started until there is a marked jack-knife dive.

(g) In executing the $\frac{1}{2}$ twisting $1\frac{1}{2}$ backward somersaults, the first somersault and the twist are to be performed simultaneously, with the somersault done straight (style "a"). Bending at the hips is permitted after the first somersault is completed.

(h) In executing the full twisting forward $1\frac{1}{2}$, the twist and somersault are to be performed simultaneously, with the legs straight.

(i) The entry into the water must in all cases be vertical or nearly so, with the body straight, toes pointed. All head-first dives shall be executed with the arms stretched upwards and the hands close together at the entry. In all feet-first dives the arms must be at the sides, with no bending at the elbows.

D. Special Regulations

1. The springboards shall be placed 1 meter and 3 meters above the water level (when pools are filled to overflowing). Springboards shall be at least 14 feet long and 20 inches wide, covered along the whole length with cocoa matting. The boards shall be made of wood.

2. The front end of each board shall project at least 1 meter beyond the edge of the pool.

3. The depth of the water shall be at least 9 feet.

4. There shall be four compulsory and four optional dives.

5. Each optional must be selected from a different group.

6. Each competitor must perform her optional dives in the order of the groups.

7. Compulsory dives, 1- and 3-meter boards:

Dive No.	Dive	Degree of Difficulty	
		1m.	3m.
1.	Plain front (or swan) dive, running	1.1	1.2
9.	Backward dive, standing	1.4	1.6
2.	Front jack-knife, running	1.3	1.4
4.	Forward $1\frac{1}{2}$ somersaults, running (b)	1.7	1.7

SPRINGBOARD DIVING TABLES

(a. Straight b. Pike c. Tuck)

Group I. Forward Dives, Body Facing Water

Dive No.	Dive	a,b,c	Degree of Difficulty			
			Standing		Running	
			1m.	3m.	1m.	3m.
1.	Plain front dive.....		1.0	1.1	1.1	1.2
2.	Front jack-knife.....		1.2	1.3	1.3	1.4
3.	Forward somersault.....	b	1.6	1.6	1.7	1.7
		c	1.5	1.6	1.7	1.7
Dive No.	Dive	a,b,c	Degree of Difficulty			
			Standing		Running	
			1m.	3m.	1m.	3m.
4.	Forward 1½ somersault.....	b	1.6	1.5	1.7	1.7
		c	1.7	1.5	1.6	1.7
5.	Forward double somersault.....	b			2.2	2.0
		c			2.0	2.0
6.	Forward 2½ somersault.....	b				2.3
		c		2.2	2.2	2.1
7.	Forward triple somersault.....	c				2.5
8.	Forward 3½ somersault.....	c				2.5

Group II. Backward Dives, Body Facing Springboard

9.	Backward dive.....	a	1.4	1.6		
		b	1.4	1.6		
10.	Backward somersault.....	a	1.7	1.6		
		b	1.6	1.6		
		c	1.4	1.5		
11.	Backward 1½ somersaults... ..	a		2.1		
		b	2.2	2.0		
		c	2.0	1.9		
12.	Backward double somersault.....	b		2.1		
		c	2.2	2.0		
13.	Backward 2½ somersaults.....	c		2.5		

Group III. Gainer Dives

14.	Half gainer.....	a	1.7	1.7	1.8	1.9
		b	1.7	1.7	1.8	1.9
15.	Full gainer... ..	a	2.1	2.0	2.0	1.9
		b	1.8	1.9	1.8	1.9
		c	1.7	1.8	1.7	1.8
		a,b,c	Degree of Difficulty			
			Standing		Running	
			1m.	3m.	1m.	3m.
16.	1½ gainer.....	a				2.5
		b			2.4	2.3
		c		2.1	2.2	2.2
17.	Double gainer.....	b		2.0	2.2	2.1
18.	2½ gainer.....	c				2.5

Group IV. Cutaway Dives

19. Back jack-knife.....		1.1	1.2
20. Cutaway somersault.....	b	1.8	1.6
	c	1.6	1.6
21. Cutaway 1½.....	b		2.2
	c	2.1	2.0
22. Cutaway double somersault.....	c		2.2
23. Cutaway 2½ somersault.....	c		2.5

Group V. Twist Dives

24. Front dive, ½ twist.....		1.7	1.6	1.6	1.7
25. Front dive, full twist.....		1.8	1.9	1.7	1.9
26. Front jack-knife, ½ twist.....		1.8	1.8	1.7	1.8
27. Front jack-knife, full twist.....		2.0	2.1	2.0	2.1
28. Back jack-knife, ½ twist.....		1.8	1.9		
29. Back jack-knife, full twist.....			2.1		
30. Half gainer, ½ twist.....	a		1.9	1.9	1.9
31. Half gainer, full twist.....	a		2.0	2.1	2.1
32. Half twisting backward 1½.....		2.1	2.1		
33. Full twisting forward 1½.....				2.2	2.2
34. Back dive, ½ twist.....		1.6	1.7		
35. Back dive, full twist.....		2.0	2.0		

Group VI. Handstand Dives

36. Handstand, headfirst entry.....	1.0	1.1
37. Handstand, feetfirst entry.....	1.0	1.2

Note.—The Fédération Internationale de Natation Amateur prohibits the following dives for women: double somersault forward; 2½ somersault forward; 1½ gainer [Mollberg]; double gainer [Mollberg]; backward spring, double somersault forward; half gainer [Isander], 1 screw; full twisting somersault forward; full gainer [Mollberg], 1 screw; half twisting 1½ somersault backward; full twisting 1½ somersault forward.

The F. I. N. A. lists the following as compulsory springboard dives for women, 1937-1940:

Dive	Degree of Difficulty
1. Flying somersault forward, running.....	1.6
2. Somersault backward.....	1.6
3. Half gainer [Isander], running.....	1.8
4. Half screw backward.....	1.6

Four voluntary dives shall be chosen according to Rules 11 to 15 of the present regulations of the F. I. N. A.

The F. I. N. A. lists the following as compulsory platform dives for women, 1937-1940:

Dive	Degree of Difficulty
1. Plain header forward, standing, 10m.....	1.1
2. Plain header forward, running, 10m.....	1.2
3. 1½ somersault forward, running, 5m.....	1.4
4. Header backward, 5m.....	1.3

No voluntary platform dives are required for women.

RULE X. SPECIAL SUPPLEMENT FOR THE NATIONAL INTERCOLLEGIATE TELEGRAPHIC SWIMMING MEET

1. The Official Rules as listed in the current issue of the **AQUATIC GUIDE** of the National Section on Women's Athletics shall be used.

2. The National Intercollegiate Telegraphic Swimming Meet shall be an enterprise of undergraduate women students. It shall be conducted under the leadership of a student manager with the assistance and advice of the woman swimming instructor acting in the capacity of faculty adviser.

3. Telegraphic Regions are as follows: Central, Eastern, Southern, Western.

4. The Aquatic Committee of the National Section on Women's Athletics acts in an advisory capacity to the National Sponsor.

5. National sponsorship goes to the region winning the highest number of points in the meet of the past year, and to the college which won the highest number of points in that region.

6. Regional sponsorship goes to the college winning the highest number of points within each region. Conditions: If the college has had 2 successive years of participation without being disqualified; and if it has not sponsored a Regional Meet within a 3 year period. If the college thus selected is unable to sponsor the meet, further rules of rotation will be sent by the National Adviser.

7. To enter the Telegraphic Swimming Meet each college must return the official entry blank together with the \$2.00 entry fee to the Regional Sponsor on or before February 1.

(a) \$1.00 of this fee is retained by the Regional Sponsor to defray expenses of postage, typing, mimeography, stationery, night letters, *etc.* Written approval of a majority of colleges concerned must be obtained before funds can be spent for any purpose other than running expenses. \$1.00 is sent to National Sponsor. No refunds are made.

8. Two meets must be held by each college.

(a) These meets must take place between February 15 and March 15, and consist of a regular program of events, and be open to friends of the swimmers. Under no conditions may closed time trials be considered official for Telegraphic competition.*

(b) The best times made by competitors swimming in either of the meets may be recorded as the official record, provided official rules governing timing have been effected.

(c) Each meet must be completed within 1½ hours.

(d) Events other than those of the Telegraphic Meet may be included on the programs.

9. Records and suggestion sheets from each college must be sent to the Regional Sponsor so as to arrive not later than March 15.

* Rule change.

10. Each college shall enter a team of not more than 15 swimmers.
11. Both relays need not be held at each meet.
12. Each college may place entries in as many as 8 events or as few as one event.
13. Each contestant must have the written approval of the college physician before she may enter the meet. This approval must be based on heart and lung examination and general condition.
14. Each contestant must have had at least eight ½-hour practices since the opening of the current school year.
15. All contestants shall have been registered in their universities or colleges as undergraduate students of full collegiate standing, shall have carried full work during the semester of competition, shall have had no failures in any subject in the preceding semester, and shall not have been subjected to disciplinary action by college authorities for character deficiency at any time during the current academic year.
- It has seemed inadvisable to make distinction between professional and amateur contestants.* It is felt that all women legitimately enrolled in their college or university and studying full time should be permitted to swim for their school regardless of whether or not they at any time have received financial remuneration because of their skill. It is realized that this stand may prevent participation by certain collegiate swimmers who, as members of the Amateur Athletic Union, may not compete against "professionals."
16. The colleges winning the first 5 places in the region will be notified by night letter from the Regional Sponsor not later than March 18.
17. The colleges winning the first 5 places in National competition will be notified by night letter from the National Sponsor not later than March 25.
18. Major and Minor results for the region will be received from the Regional Sponsor not later than March 25.

Officiating Swimming Meets

EDWARD T. KENNEDY

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The official is a person often discussed and much criticized. If nothing is ever said or written about him, and it seldom is written but very often said, it is either because one hesitates to tell the truth or because there seems little hope of improving matters, especially in the case of unpaid swimming officials. There is plenty to be said in criticism of a "certain" type of official one sees at dual meets in almost every line of sport. I do not wish to imply that only "swimming officials" are incompetent. All sports suffer from this disease. Incompetent and biased officials are dangerous individuals, not only to the competing teams, but also to the institutions they represent.

I have witnessed and officiated at numerous Interscholastic, Inter-

* Rule change.

collegiate and National Championship Meets. I know what a ticklish job it is. However, despite all that I have said previously, it is perfectly possible for the average sportsman to make at least a passably good official.

Any official, no matter in what capacity he or she may be officiating, must have an up-to-date knowledge of the "Rules of the Game" in the sport in which he or she may be officiating. The most important positions, taking them in order of importance as I see them for officiating swimming meets, are as follows: First, of course, is the Referee; second, the Starter; third, the Chief Judge at the Finish; fourth, Chief Timer; fifth, Inspectors, Touch-off Judges, Announcers, Clerk of Course, Scorers. All of these rated fifth are so-called minor officials and are being classified in the same group. I shall comment briefly on each of these in order.

Referee.—The referee is supreme, for his decision overrules all. He must be alert, know his rules absolutely and be ready to make a positive decision at any time. He must be tolerant, tactful and considerate of the other fellow, especially so with contestants, who may be excited in the heat of battle. In other words, he must be a gentleman. He must realize that a person acting in that capacity opens himself or herself to criticism at all times, and he or she must be ready to accept the consequences. The referee should choose, out of those present at the time of the meet, the other judges, timers, etc., and place them and instruct them in their duties. It is very important that he sees that these people are in their proper positions and that their decisions are never influenced by outsiders. He should be CERTAIN that no announcements are made by an excited manager or some other person, until he, the referee, has advised the said announcer to make the announcement. Denials never have the same effect as the first announcement. Of course, the referee should never leave the pool deck while the meet is on, and he should follow every race from start to finish, ready and willing to enforce every rule to insure a fair chance for every contestant swimming in each race. If these instructions are followed, I am sure a referee will have an easy task and also be much in demand.

Starter.—The starter is next in line. His duties begin when the men come up to the mark. A good starter is a valuable asset to a meet because it is his duty to see that all races are started fairly so that no one individual shall have an unfair advantage over another. He must be calm at all times, and to save himself a great deal of trouble, he must insist on absolute quiet at the time of each and every start. He must try to gain the confidence of the contestants in his ability to get the individuals off to an even start and to assure these swimmers that, in case of a false start, the next start will not be hurried because of the nervousness of any one contestant. In other words, the starter should try to make all of his starts as nearly alike as it is possible to make them. He should start all races strictly according to the way the rules are written and not try to include his own interpretations. If the starter and the contestants realize that there is no contest between the starter and the swimmers, but simply a contest between swimmers after they enter the water, then and then only shall the

starter have an easy time. My experience has been that the best place for a starter to stand in starting races is off to the side and in front of the swimmers. This gives the contestants a chance to see him and also a chance to see the gun, which they should be allowed to see, because the rules say that "the timers shall start their watches on the flash of the gun" and therefore the swimmers should have the same right if they so wish. Some of the faults of starters might be classified as follows: 1. Over-excitement and change of tone of voice; 2. position or rather out of position; 3. commands too rapid; 4. recalls too fast or too slow. A starter's task at a swimming meet is one of the most nerve racking and difficult of any of the officials' tasks because he or she must not only deal with high-strung contestants but also with a biased and sometimes over-excited audience. Experience will show, however, that the job can be done successfully and admirably with a little care and consideration. This is one field that needs development.

Chief Judge of Finish.—This position needs a person who has had some experience in choosing places in races, and the individual should remain calm at all times. Most of the difficulty, in this position, comes from the official's trying to judge the finish of a race from an improper position. The only place to judge a finish is at the end of a pool where the judge will be watching the WALL and not the swimmers, so that he will choose, for first place, the first person to touch this wall. The official should not follow the swimmers into the wall but watch for the touch. Conflicts occur because officials lose their men in a race, either by allowing the contestant to leave the water too soon or by failing to get the lane number and the name of the swimmer. Again conflicts occur when the same swimmers are chosen for different places. A chief judge should be of great assistance at these times. A chief judge overrules a chief timer at all times, except at the discretion of the referee.

Chief Timer.—The chief timer should check all watches or at least see to it that suitable watches are being used to time races. He should advise his assistant timers to report their respective times, in person, to the chief timer, who in turn will give the official time to the announcer to be announced. In case of a record, he should notify the referee and see to it that all regulations are carried out so that the swimmer will get credit for his performance. A good chief timer can be of great assistance to his referee.

Inspectors, Touch-off Judges, Clerk of Course, Announcers, and all other officials may find their duties outlined in the swimming rules. All of these individuals play an important part in the running of a swimming meet, and they should be chosen and advised so that harmony and fair play will prevail at all of our swimming meets. We all have had trying experiences of high-strung audiences clamoring for vengeance at all costs, or some such similar condition. It is at times such as these that all of the calmness, ability, and experience of each and every official is needed to see that the correct and unbiased decision is rendered.

In conclusion, please allow me to say that after observing the situation very closely for many years I am firmly convinced that officiating at our

swimming meets has improved a great deal and in most instances the persons concerned are doing good jobs.

The New Breast Stroke

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The historical breast stroke of old cannot hold out much longer in this mechanical streamline-minded competitive world. The competitive rules have held the stroke within a limited scope of its own for many years. However, in recent years the rule requiring that arms be kept under water was no longer strong enough to keep the arms under in the recovery phase. The rules finally gave way as to use of arms but not as to use of legs. Attempts have been made by the writer to make permissible the use of the Dolphin* stroke leg action, which eliminates the underwater recovery of the legs to speed up the stroke and eliminate recovery resistance. This kick seemed to be too much of a departure from the orthodox. However, a modified form of this kick has been accepted and termed within the rules. This kick was used by Jack Kasley of Michigan and with it he was able to make remarkable world records.

In the Dolphin kick the legs engage the water, both on the up and the down pressing and whipping of the legs, engaging the water on the downswing with the instep or top of the foot. On the upswing the water is engaged with the sole of the foot. The engaging of the water with the sole of the foot throughout the kick is within the orthodox rules. Engaging the water with the instep is not. Jack Kasley and his coach, Matt Mann, therefore, kept the knee spread very narrow, with only a slight bend at the hips, and then turned the toes down and slightly outward toward the knees, in such a position that on the downswing the soles of the feet engage the water. The pattern of the leg action is virtually a dual rhythm; that is, both legs moving together in the vertical plane similar to the Dolphin stroke. Action is almost continuous. This kick is not a natural movement and can be used only by persons whose tarsal bones are loose-jointed enough to allow the feet to get the proper angle.

In the Dolphin kick the downswing is more natural, just as it is in the flutter kick of the crawl; it is similar to the flutter kick except in the Dolphin both legs undulate up and down simultaneously in a dual rhythm. (See *Intercollegiate Swimming Guide*, 1937, p. 52.) Greater and more effective propulsive force results because of the continuous undulating movement.

In 1935 the transition from the orthodox butterfly use of arms with orthodox leg kick seemed to be too much of a departure for the swim-

* Armbruster, David A., and Sieg, Jack: "The Dolphin Breast Stroke"; *Journal of Health and Physical Education*, April, 1935.

ming world to accept. The Kasley style of leg action was a modified form and still kept in the kick a semblance of knee spread. Kasley's style is a forward step toward the Dolphin type of kick. The Dolphin is bound to become a definite competitive stroke. If it does not replace the orthodox breast stroke completely, it will become an entirely separate competitive event.

The breast stroke is undergoing a revolution. It needs speeding up. To permit the arms to eliminate the recovery and not make the same concession for the legs may be discrimination. But the transition from a lateral leg movement to a vertical movement has been rapid. The swimming world at first could not accept such an erratic departure. However, the trend is toward it at present. It is inevitable. A parallel case in point is the automotive industry. The motoring public would not immediately accept the extreme streamlined designs. It was too radical a departure from the box car, wind-resisting, gas-consuming type of body construction. Gradually each year manufacturers went farther and farther until today an extremely streamlined car is no longer a curiosity on the highway. The same streamline construction has taken place in aircraft and shipcraft industries.

There is no question but that the breast stroke today is definitely undergoing an entire revolution. Our breast stroke swimming team candidates have streamlined legs. They are not heavily built individuals denoting power such as the orthodox kick required. A heavy person cannot use easily the butterfly arm action because his up and down movement requires too much effort for a distance of 200 yards. However, with a kick-glide-pull rhythm he is able to control the energy output and give himself rest and relaxation on the glide rather than the kick-quick-pull rhythm. It is a debatable question, and a problem with heavy individuals, whether to throw the arms out of the water in the recovery phase or keep them under. For 100 yards most persons, whether heavy or buoyant, can continuously "butterfly" the arms to the finish. Kasley was a buoyant although stockily built individual and could remain high in the water, eliminating up and down movement. He could, therefore, use the "butterfly" of the arms over the entire 200-yard distance. He conserved his energy by not having to pull his body up out of the water on each stroke.

Today, our breast stroke swimmers are training daily by means of throwing the arms out of the water to obtain many practical conditioning factors such as strengthening the wrists and forearm muscles, as well as shoulder and chest muscles, in order to withstand a punishing 200-yard race. All of our free style swimmers do the Dolphin fishtail action without the use of the arms. This daily exercise limbers up every vertebra in the spine, from the base of the skull to the end of the sacrum. It limbers and relaxes all the body muscles.

Today the breast stroke presents a confusing problem to the coach and the pupil. All persons want to "butterfly" the arms. However, as pointed out above, not all boys can throw the arms out and distribute effort over an entire distance of 200 yards, unless well conditioned. Nearly all persons can do it for 100 yards. Beyond that distance it be-

comes the real problem. Today the breast stroke is "wide open," and considerable study and research is necessary to develop it further, to exploit and improve its speed. Speed of the breast stroke must be improved if it is to remain alongside the crawl and back crawl strokes in competition. It reminds one of a streamlined automobile body with a truck motor under the hood. There is plenty of power but it is not geared for high speed. The motor in the breast stroke must be geared up to a higher ratio. This can be accomplished only in the kick itself.

The orthodox breast stroke will never become extinct. Its case is comparable to that of the side stroke. Even though the crawl replaced it because of greater speed, the side stroke was too practical a part of our educational water safety program to be discarded.

It is not the writer's intention to condemn the orthodox breast stroke. He wishes to encourage greater use of it, but in a new, streamlined design that appeals to the speed-loving American boy and girl. The orthodox breast stroke always will remain with us. It is too smooth and graceful, too practical and too useful in the cultural and educational water safety program to be cast aside entirely. Whether the Dolphin stroke, the Kasley style of kick, or whatever style is used, the stroke will be speeded up as time goes on. And as this happens the rules should make way for its advance even to the extent of adding a separate event in our competitive program.

A few timely suggestions are hereby given to help those who may be somewhat confused as to the mechanics of the "butterfly" and the timing of its movements. Time the movements of the arms with the legs, so that the arms are lifting out of water near the hips as the legs start the recovery. When the arms, recovering out of the water, reach a point slightly past the head, the legs are in position for the drive. As the legs drive, of course, the arms are dropped forcefully into the water, each arm in front of its own shoulder and not closed together as in the orthodox stroke. A momentary glide is taken when the pull is started. The whole is repeated. Swimmers should avoid a wide spread of the knees, because the time required to execute a wide knee spread is too long for the "butterfly" stroke and the faster timing rhythm is lost. Perfect timing rhythm must be obtained between arms and legs before the stroke becomes effective in speed. The entire stroke should have a sing-song rhythm like this: kick-pull-glide; kick-pull-glide. The pull follows quickly or slowly after the kick, depending upon speed desired or distance to be covered or energy to be conserved. If too much glide is taken, the body sinks, but it does allow momentary rest. If faster speed is required, a quick pull after the kick should be used, thus keeping the water level more constant, or maintaining the body higher up out of the water. Going into the arm pull quickly prevents the body from sinking too low. In the "butterfly" arm action with the orthodox breast stroke kick, the wide spread of the knees slows up the whole stroke and it will be difficult to lift out the arms for the recovery. The arms should not be pulled too far back, for this too makes difficult the beginning of recovery.

In conclusion, permit me again to state that not all breast stroke.

swimmers should "butterfly," because some individuals are too short-muscled or have a broad scapula which is limited in sliding toward the spine as the arms are lifted out. Then, too, the buoyancy weight of some persons is too heavy. However, all swimmers who wish to build up more strength in the arms and shoulders should "butterfly." It also stretches the shoulder joint and gives it more freedom of movement for the crawl and back crawl strokes. Boys and girls enjoy swimming the new breast stroke. It conveys through its accomplished performance the use of greater skill, viscous action, speed and the joy and sensation of flying in and out of the swirling white surface, which in itself is fascinating to every red-blooded American boy and girl.

Trends in Water Safety

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If it were possible to make a survey of the *causes* of all drowning and near-drowning accidents which occur in the country, undoubtedly it would show that the majority of them could be directly attributed to one or the other of two fundamental things; namely, either lack of knowledge or lack of skill.

Too many people who frequent the water just do not know the element in which they bathe and having little or no knowledge of conditions, cannot determine where they can be reasonably safe or where and under what conditions bathing is hazardous. Furthermore, far too many of those who "go swimming" have small conception of the limitations their swimming ability or lack of it, places upon them. This is why so many get into difficulty in the water, to be rescued if they are fortunate, to drown otherwise. But this is only half the picture.

As a people we use the water freely for recreational purposes. We like to think of ourselves as a "swimming nation" but we don't really believe it because we know that there is a vast difference between bathing and swimming. A casual survey of any public bathing place will readily show that the general level of swimming skill is appallingly low. Usually there are more non-swimmers than swimmers and even the great majority of those called swimmers employ crude, half-learned strokes which automatically limit them to relatively short distances. Only the small minority of genuine swimmers have the ability to swim for any considerable length of time and can meet adverse conditions in relative safety. Lack of skill, or no skill at all, presents the other half of the picture of the effect of lack of knowledge and lack of skill in the water.

Obviously, then, any program of preventive water safety (and prevention is certainly of far greater importance than cure), should be

based on equipping bathers with knowledge of water conditions and skill to meet them. The better informed a person is and the more adequately he is grounded in the art of swimming, naturally the safer he will be in the water.

The first major trend in modern water safety programs must be based on supplying the swimmer with such information as he may need concerning the water in which he bathes. A non-swimmer knows that if he gets into deep water, he will probably drown. What he does not know unless someone tells him is where deep water is located and how far he can safely go. He can't be expected to avoid holes, "step-offs" or channels if he doesn't know where they are. If he has never heard of an undertow how can he recognize the conditions under which undertows are formed? Or, a very good swimmer from inland, well-schooled in strokes, may go swimming at a surf beach on the sea-board. He has never been told about run-outs. Swiftly, one starts to move beneath him as he swims and the first thing he knows, the current sweeps him out from the beach and puts him in jeopardy because he doesn't know how to employ his swimming ability to advantage. These are but two examples and they could be multiplied a hundred-fold if space permitted to show where lack of knowledge may result in tragedy.

There is no lack of information concerning water conditions; the problem is for those who need it to acquire this knowledge. This is usually done by inquiry, by warning or by experience and of the three the latter is probably the worst teacher. The best way, of course, is to teach it, parallel to swimming instruction. The best time, naturally, right in the lesson or course, and as a part of it.

The Red Cross has devoted a large part of its new textbook, "Life Saving and Water Safety," to this body of knowledge. Within its necessarily limited scope it has attempted to set forth in simple understandable form a fund of information concerning water conditions and practices which will make of swimming a safer sport. But it proposes to go further, and include in all swimming and life saving courses and tests, material designed to "educate" the pupil and to measure his knowledge of the subject. Only in this way can it be assured that the pupil will possess knowledge comparable to skill, to assure him reasonable safety in and on the water.

The probable reason why so many people cannot swim at all, or swim very badly, is because they have either never been able to get instruction from trained swimming teachers or, in the second case, because they are self-taught, coached by untrained volunteers or got their start by campaign methods and never went farther. The number of trained professional and volunteer instructors now available is entirely inadequate to begin to meet the needs of the 30,000,000 people in this country who frequent the pools and bathing beaches of this country. Thousands more are needed before even a good beginning can be made on teaching the mass of bathers to swim.

To meet the demands of instructors, new teaching material must be made available, to more adequately teach those who are waiting

to be taught. One of the first and most fundamental safeguards in the water is not only for the individual to swim, but to swim as well as he possibly can within his physical limitations. Teaching methods, courses and tests have left much to be desired, in the past. They have not always been applicable to all age-groups and have in many instances stopped at a point in the pupil's development where further instruction is vitally essential for his safety. How many non-swimmers have been taught, especially in swimming campaigns, the skills necessary to pass a beginner's test and have then been turned loose in the belief that they could swim and that advancement in skill was then only a matter of further practice and the development of strength. The need for formal swimming instruction has but just begun at that point. Yet how few, comparatively, are given specific added instructions which will enable them to become truly skilled as swimmers. Laudable attempts have been made by some swimming authorities to provide course material upon which swimming instruction could be based beyond the beginner or novice level. Some of this work has been admirable, but either because of local restriction or limited application it has not come into general use. There has been and is a real need for planned progressions in swimming instruction which are applicable to swimming generally and capable of being put into universal use.

The Red Cross has been aware of this condition for many years but has been somewhat reluctant to enter the field of swimming as such, to any considerable extent. Since, however, the need is increasingly evident throughout the country for standardized text material, courses and tests and because safety in the water is based so largely on the individual's personal skill, the Life Saving Service of the Red Cross is preparing this material to be offered through instructors to the people of the country at large. Text material on swimming and diving has been prepared and was published early in 1938. At the same time four standard progressive swimming courses and tests for beginners, elementary swimmers, intermediate swimmers and swimmers were issued to replace the no longer adequate beginner's and swimmer's tests. In presenting this material, the Red Cross offers it as its contribution to the field of swimming instruction in the hope that through it the whole general level of swimming skill may be raised and thereby prevent water accidents.

Through its national organization, field staff and aquatic schools the Life Saving Service will seek to supply steadily increasing numbers of adequately trained instructors who are much better fitted to give swimming instruction. Gradually, it is planned to supplement examiners' training in life saving with schooling in swimming instruction which will enable them to greatly broaden their field of teaching activity. Only in this way can safety through knowledge and skill, as a personal thing, become a reality.

Life saving as it is generally known is concerned with the art of rescue and resuscitation. While it is believed that a program of instruction designed to make better and more effective swimmers will

have almost immediate effect in reducing the number of water accidents, it is not likely that it will lessen the need for rescue and resuscitation skill among advanced swimmers. Indeed, it should be one of the objectives of every learning swimmer, to become good enough in the water to qualify as a "Life Saver."

Two trends are apparent today in life saving. One is concerned with greatly amplifying life-saving technique to include methods of self-rescue, elementary forms of rescue and special forms of rescue to meet less usual conditions. Under the first head appear instruction and, where possible, actual practice in such things as the release of cramp, disrobing, getting out of weed, *etc.* Under the second, forms of rescue which can be made from shore or with equipment. The third includes methods of using boats, canoes and surfboards for rescue, and special methods for use in surf, in swift currents and through the ice, the last two being theoretical instruction, of course. New courses were introduced in 1938, which will much more adequately cover the many forms and techniques of rescue.

The second trend in life saving, while seemingly elementary in its design, is nevertheless of great importance. Heretofore life saving has been treated as a thing apart from swimming instruction, to be undertaken when one had acquired the swimming ability necessary for qualification. Swimmers of lesser ability and even non-swimmers are frequently in position to aid or rescue drowning persons. While this has not been overlooked exactly, nevertheless they have not always been given the means for employing their lesser abilities. A whole series of elementary forms of rescue are well within the powers of the non-swimmer and the novice, provided they are instructed in them. So, the Red Cross has woven into the structure of its proposed swimming courses such fundamental things as reaching, throwing and wading rescues or assists, and resuscitation, as a means of equipping the learning swimmer with rescue skills well within his capabilities, which he can perform without great risk to himself. Life saving skill is now so wide in its scope that it can and does include all forms from the simplest hand reach from shore or dock to the surf rescue by means of a surfboard. For every level of ability there are definite forms of rescue which can be used successfully.

It should be readily apparent from the foregoing discussion that real safety is to become more and more a personal thing, in that its aim is to make anyone capable of taking care of himself when in the water. It would be ridiculous to think for a moment that everyone eventually will be so fitted with knowledge and skill that water accidents will not occur. Maybe it will come with the millennium but that is a long way off. Bathing places, organized and equipped for safety, and lifeguard supervision will ever be needed, human nature being what it is. But with the gradual increase in numbers of those who can swim well and intelligently, there is bound to be a considerable lessening in the number of those who are brought face to face with death by drowning.

Teaching Hints

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1. In presenting new technique a demonstration by the instructor or an able student helps to create a mental picture. The latter is preferable so that the instructor may give explanations. The demonstration is useful at the beginning and during the process of learning a stroke.

2. It is wise to present all parts of a stroke in one lesson or at least to explain them so that the student will have a more definite feeling of what work on the stroke will mean and a clearer picture of the *whole* stroke.

3. Swimming may be taught to groups but individual help is always necessary at one time or another. Because students learn at different rates of speed, some lessons may need to be entirely individual instruction.

4. Poor coordination will be benefited by land drills sometimes before a mirror and counting by the instructor and student while the latter is swimming. Also *concentrated* work is necessary on the part of the student.

5. Watch the students' reactions—always teach the *student* the material—not the material to the student. Sometimes when the students arrive for the class they are not ready for the material you have prepared—think of the student, not only of the material you must present.

6. Meet fear in a student by perfecting:

a. breath control

b. floating

c. ability to change strokes without touching bottom, and treading

d. bobbing (sinking and rising in a vertical position while breathing)

e. swimming and sinking, rising and swimming without touching bottom

f. jumping in feet first, at first bending close to water then gradually standing straight.

7. Do not *make student* do something she whole-heartedly fears. Ascertain the cause of the fear—encourage reasoning about it.

8. Do not command a student to forget fear—instead help her to concentrate on her stroke counting, breathing, relaxing while she is experiencing deep water swimming.

9. If a student becomes panicky and it becomes necessary to aid her, if she is close enough call directions, *i.e.*, float, relax, *etc.*, in a calm, clear voice. If this does not immediately give aid, rescue—preferably with a pole or other equipment. Go yourself as a last resort (this type of rescue is the most spectacular and may frighten other swimmers who are not too confident. Also it may attach undue im-

portance to the incident and the student may feel that she was worse off than she was actually.)

10. After such an incident (above) try to prevent the development of new fears by discussion of the incident belittling it and encouraging the student to analyze it, learn from it and then forget it.

11. The student should practice the technique that caused the incident, then if possible the same day repeat the technique—but do not force her.

12. An incident of this nature many times undoes weeks of work. Prevent, by preventing collisions in the water until swimmers are confident—by teaching how to float, rising from under water, treading, by encouraging the habit of *thinking* rather than feeling (fear) while swimming for the first time in deep water.

13. Emphasize thoughtful practice rather than thoughtless drill when practicing strokes.

14. Know the objectives for which you are striving—general and specific; use lesson plans leading to objectives. Check results frequently.

15. Teach beginners to rely on themselves as much as possible.

16. Staging a rescue is one method of teaching the life saving methods and demonstrating them.

17. One of the best ways to develop new methods is to work out techniques yourself in the water. Experience what you want students to experience.

18. Work must be planned if the objectives are to be achieved. Written lesson plans for each lesson are helpful or a skeleton plan for the term may be used. A day's plan should include:

- a. few minutes' free time
- b. review of old material
- c. introduction of new material in easy progression
- d. variety—in and out of water
- e. relaxation—floating, stunts, and fun
- f. material not too easy nor too hard.

19. One of the most important lessons of the term is the first one, particularly for beginners. It is imperative that the work presented:

- a. meet needs and abilities of class
- b. include easy and hard technique
- c. allow students to show what they know
- d. allow free time (observe what they do during that time)
- e. start concentrated work on a technique most of them wish to learn.

20. When a stroke has been learned and practice is necessary to perfect form, the following may be used as motivators:

- a. teach the tank turn for that stroke so that it may be practiced with the stroke
- b. swim stroke in tandem, with partner
- c. swim the length or width in as few strokes as possible
- d. swim a distance
- e. use stroke in practicing life saving.

21. If student has trouble learning to exhale under water:

- a. take breath, hold nose, go under, let go nose and at same time let breath out
- b. watch someone do it correctly
- c. relax, do it slowly
- d. start exhaling before going under, and continue going under
- e. different positions—bending forward, holding on, stand straight, *etc.*
- f. make very clear to student what she is to do
- g. practice in basin of water
- h. open eyes under water

22. Be sure student understands *exactly* what she is to do. She should have a clear understanding of body position, arm movement, *etc.*

TEACHING HELPS

Land practice	Individual help
Imitation	Questioning student
Demonstration	Patience
Shallow water practice—standing and walking	Manual assistance—in and out of the water
Holding to support	Partners
Music	Observing other learners
Ball for support	Discussion
Flutter board—for support	Knowledge of value of technique
Mirrors	Keeping warm in water
Games	Awards
Stunts	Easy progression
Competition	Clear, concise description
Charts	Student self-analysis
Testing	Grading
Diagrams	Counting
Pictures	Criticism—constructive
Distance	Proper classification of students
Exhibitions	Always develop:
Praise	breathing
	relaxation
	rhythm

The Modern Swimming Pool: Its Sanitation and Safety

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To build a modern outdoor swimming pool, one should have the advice and assistance of an architect, a construction engineer, an expert on filtration equipment and purification of water supply, a public

health official and various physicians, especially a bacteriologist, an ophthalmologist, an otolaryngologist, and a dermatologist. In Minnesota, as in many other states, the final plans for a swimming pool and adjacent bathhouses must be approved by the Division of Sanitation of the State Board of Health. The advice of a landscape architect is also needed so that the layout of the pool may be as attractive as possible in order to secure the favor of the public. The successful financial operation of the completed unit and the intricacies of structural details will not be considered in this report. However, I wish to emphasize the fact that the proper soil and subsoil are necessary for a foundation on which to build the pool. The shape and size of the pool will depend on the use to which it will be put.

The antiquated swimming pool of the 'nineties, with its dingy wooden bathhouses and lack of sanitation and of means for purification of the water, was justly condemned because of the many respiratory, gastro-intestinal, and cutaneous infections acquired therefrom. The old swimming holes and beaches then usually were preferred as places in which to swim. Even today such places can be made relatively sanitary by the addition of gravel to the bottom and by dragging through the swimming area daily chemicals containing chlorine and sometimes in addition ammonia and copper sulphate.

The next era was that of concrete swimming pools which were drained and refilled periodically; often there was a small, constant flow of water through the pool. This method requires a great deal of water and operation is expensive and relatively inefficient. It is difficult to maintain an equal distribution of chlorine when it is added manually and to avoid smarting of the eyes resulting from an excess of chlorine.

The idea of the modern swimming pool dates back to 1918 when the American Public Health Association and the Conference of State Sanitary Engineers formed a joint committee to study the conditions in bathing places, under the guidance of Mr. Stephen DeM. Gage. In 1926 they published a forty-five-page pamphlet on swimming pools and other public bathing places. This was revised in 1927 and has been modified only slightly by annual "Progress Reports" since then. Most of the data pertaining to swimming pools and bathing beaches during the last ten years are also found in a monthly magazine, "Beach and Pool," in the large manuals which the publishers of this magazine put out annually, in numerous articles in the "American Journal of Public Health" and in the "Journal of the American Waterworks Association," and recently in articles on trichophytosis in various medical journals.

It is not possible to discuss variations in opinion regarding minor details of sanitation. This paper is based on a review of the literature together with first-hand information obtained from members of the professions mentioned in the first paragraph.

Sanitation of the modern concrete or tile swimming pool is based on the same principles as purification of the supply of drinking water

for cities which have a water supply that is originally polluted. It applies equally well to indoor and outdoor pools and to pools varying in capacity from less than 50,000 to almost 2,000,000 gallons of water. The water is purified by passing through a set of pressure filters or gravity filter tanks and being treated with chlorine and ammonia in proper amounts. Let me use our new municipal pool as an example. It is 165 (50 meters) by 100 feet with an additional diving area of 25 by 50 feet and holds 570,000 gallons of water. The city water, which fulfills drinking water standards, comes into the pool through a surge or supply tank; there is a drop, or gap, to prevent any water from the pool backing up into the city water mains. Because of a similar device water cannot back up from sewer connections or from toilets into the swimming pool or the filters, thus avoiding any possibility of an outbreak of amebic dysentery such as occurred in one of the larger cities recently because of faulty plumbing. Once the water is in the pool, recirculation is as follows: Water is withdrawn from multiple outlets at the deep end of the pool and passes through a hair and lint catcher; the proper amount of chlorine is added, and then definite amounts of alum and soda ash, after which the water goes through the circulating pump. The water next passes through pressure filters and proper amounts of ammonia are added. The water then flows into the pool at the shallow sides, through eleven inlets. A uniform distribution is obtained throughout the pool and 1,200 gallons of water are recirculated every minute, or the entire contents of the pool every eight hours. According to the standards of the joint committee the maximal bathing load of the pool in Rochester is about 1,200 persons per hour which is far in excess of the number that could be comfortably accommodated in the pool on the basis of its square surface. If the filtration took place once every twenty-four hours instead of every eight hours, the bathing load would be reduced to less than 500 persons. Theoretically the pool could accommodate 14,000 persons in twelve hours, or twice that number if the pumps were operated continuously throughout the other twelve hours, when bathers are not in the pool. The maximal number of swimmers actually has been only 2,200 within a single day. With this large margin of safety it is permissible to allow bathers to use their own suits and to enter the pool without caps. The hair and lint catcher prevents clogging of the filters or pump. An artificial sand beach within the enclosure of the pool would be impractical because sand would cause rapid wear on the pumps. In some instances there is a sand beach adjacent to the pool, bathers having to go through a foot bath and shower before entering the pool again.

The pressure filters consist of three large tanks containing many layers of sand and gravel, through which water passes at the rate of 3 gallons per minute per square foot of filter area. The alum and soda ash are added to form a jelly-like substance in the filter bed which will catch the bacteria and alkalize the water. The amounts of chlorine and ammonia are controlled by accurate chlorinimeters

and ammonimeters identical with those used for the purification of city water supplies. Every twenty-four to forty-eight hours, depending on the load in the pool, or when the pressure gauges on the filters show a difference of 5 pounds between ingoing and outgoing water, the filters are backwashed at about four times the usual rate of filtration and this dirty, polluted water goes into the sewer.

In spite of recirculation some dirt and foreign particles of various sizes are deposited on the bottom of the pool. These are cleaned out by means of a vacuum cleaner which works under water. Particles which float on top of the water usually drift to one side of the pool and can be removed by a screen or muslin rake or by causing the water to overflow into the scum gutters. The daily loss of water from backwashing the filters, spilling into the scum gutters, evaporation and use of the vacuum amounts to 5 to 8 per cent of the total capacity of the pool; this is replaced by clean city water circulated through the filters.

More than 0.5 part of chlorine per million of water is usually found to be irritating to the eyes, although in many instances the acidity of the water and not the chlorine has caused conjunctivitis. In 1929, it was found that the addition of ammonia to water which had been treated with chlorine resulted in the formation of chloramine, which did not irritate the eyes and that for outdoor pools it was especially advantageous because it rendered the chlorine more stable when exposed to sun and air and also usually controlled the growth of algae, thus obviating the necessity of using solutions of copper to control the growth of algae. It is important to keep the pH of the water between 7.2 and 7.8 to avoid formation of nitrites and to obtain maximal sterilizing action. As much chlorine as 1 part per million of water can be used without irritating effects when chloramine is formed. In the Rochester pool it has been necessary to use only 0.3 to 0.5 part of chlorine per million of water and to maintain an alkalinity of 7.6 to 7.8 to keep the water at drinking water standards of purity. This has been controlled by almost daily bacterial analysis of samples of water from the pool. The amount of chlorine and ammonia necessary will vary with the atmospheric conditions, the amount of sunshine, and the number of persons in the pool. A rain will cause a drop in the chloramine content. Chlorimetric readings against simple standards, to determine the amount of chloramine present, are made three times a day by the orthotolidin test and tests to determine the alkalinity of the water also are made at the same time.

A fence surrounds the modern swimming pool to keep spectators off the walks and to prevent swimmers from tracking dirt and grass, which would increase the load on the chlorination and filtration systems. The scum gutters drain into the sewer and the walks around the pool drain away from it. A fence is an important factor of safety which many private clubs that maintain pools seem to ignore. One cannot tell when some small child may fall into such a pool when no one is around and be drowned, let alone the danger of contamination of the pool by dogs and other animals.

Underwater lighting for the deeper portions of the pool is a necessary safety factor, as overhead lighting will not penetrate more than 5 or 6 feet if water is roughened by swimmers. Drownings have occurred even in indoor pools in the presence of life guards because overhead lighting was inadequate.

The modern bathhouse should be light and airy and should have a roughly finished floor which is not slippery. The same standards apply to the walks around the pool and to the bottom at the shallow ends of the pool for it has been shown that most accidents in pools and bathhouses occur from persons slipping and bruising themselves or even breaking a bone.

Every person should be required to take a soap and water shower bath and to go through a foot bath and needle shower before entering the pool, as well as to take another foot bath on coming out of the pool. The use of foot baths containing 1 per cent solution of sodium hypochlorite, or calcium hypochlorite, will reduce materially the incidence of athlete's foot (trichophytosis), and acts as a prophylactic. The floor, too, should be sprayed with this solution every day. Life guards and attendants should be instructed in regard to obvious cutaneous and respiratory infections among swimmers. A few simply worded regulations regarding sanitation and conduct in the pool, accompanied by illustrations when possible for the benefit of the children, should be posted in the bathhouses. It is obvious that certain persons should not go swimming, or more particularly, should not dive. Among these may be mentioned persons whose own bacterial flora may be forced up the eustachian tube and may set up an infection of the middle ear and others who have had otitis media and have been left with open ear drums.

I have outlined the method of purification of water by the use of chlorine and ammonia. Sodium hypochlorite is also satisfactory for the purpose, but the use of ultraviolet light and ozone cannot be recommended as there is no satisfactory residual power for purification of the water in the pool after it has passed through the filters. The use of a silver electrolytic system, as employed in some city water supplies in Germany and in pools in other countries, needs to be investigated further.

The modern swimming pool should be operated under the same standards as those required for purity of drinking water; such a pool can be maintained practically free of any pathogenic bacteria. The inconvenience caused to bathers by not having a sandy beach within the enclosure and by having to observe a few sensible regulations is more than compensated for by an attractively designed pool with wide walks around it where they can sun bathe, and by intelligent management. All known safety and sanitary features are provided for in the operation of the modern swimming pool and when it is conducted intelligently it offers as safe and sanitary a place to swim as can be found anywhere.

Care of Swimming Pools

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There are two questions concerning swimming pools which pool supervisors must be able to answer satisfactorily. Colleges and universities may be able to refer these two questions to technically trained people on their staffs—to their chemists, bacteriologists and medical advisors. But such help is not available for a large proportion of the several thousand swimming and wading pools now in use by our young people, and officials must themselves assume the responsibility for the condition of their pools. Even where city or state regulations are in force, inspection is usually too infrequent to release the pool officials from responsibility.

The two questions which must be answered, and answered in the negative, for even the smallest and well-equipped pool, are:

1. Is the pool water irritating to the eyes and nasal membranes?
2. Do pool conditions make disease transfer possible?

In considering the first question, we must remember that the sensitive membranes of the eyes and nose are irritated by even weak acid solutions, and it is therefore necessary to maintain in the pool water a slightly alkaline condition, resembling the normal conditions of those delicate tissues. Maintaining an alkaline condition demands very careful supervision, because the alum or other chemical used to help clarify the water causes an acid condition, unless it is counteracted by the addition of appropriate amounts of alkali.

We must therefore have a quick method of adding alkali, such as ammonia or some inexpensive form of soda—usually washing soda (sodium carbonate or soda ash) or caustic soda (popularly known as lye). Of the two soda compounds, caustic soda or lye is less likely to make the water cloudy or “milky.” The use of ammonia also prevents a milky appearance of the water; and ammonia has recently grown in favor, partly because of the ease with which liquid ammonia may be handled.

Alkali may be added to the pool periodically, in prescribed amounts each night or during intervals when the pool is not in use. More uniform alkalinity may be secured by such devices as soda blocks or soda bags, which are placed on the bottom of the pool and thus slowly add small amounts of alkali to the water. Much to be preferred, however, are the types of pool construction which include automatic apparatus by which small amounts of dissolved soda or ammonia are added to the water on its way from the filter to the pool.

Since chlorine is itself an irritating substance, many people, naturally enough, attribute to chlorine the stinging or smarting of the eyes and nasal membranes which they sometimes experience in improperly controlled pools. The amount of chlorine necessary for disinfecting pool water is not great enough to cause discomfort. Such symptoms as sting-

ing or smarting of the eyes indicate the need of immediately checking the acid-alkaline condition of the water. A simple test which will enable the pool supervisor to avoid objectionable conditions may be by using one of the familiar color indicators, such as phenolphthalein, which gives a pink color in the presence of alkali, but is colorless when the medium is acid or neutral.

The test may be made by placing three drops of the pool water on one-half of a clean white surface, such as a plate, and placing three drops of distilled water on the other half, and then adding to each of these one drop of pink phenolphthalein solution. If the pool water is sufficiently alkaline, the phenolphthalein solution will cause the pool sample to appear slightly pinker than the distilled water sample, or to maintain its pink color a few minutes longer. A much darker color with the pool sample indicates too much alkali.*

Swimming pool water should be on a par with drinking water, because bathers often swallow the water. Good quality is also necessary to avoid infections of the eye, ear and nose membranes and such skin diseases as athlete's foot. The pool filter clears the water circulating through it by removing from it a large portion of the bacteria, as well as such foreign matter as skin scales, soil or grime, and fibers from the bathing suits. Specific chemical treatment is needed, however, to make sure that no pathogenic organisms can survive in the pool water. Adequate chemical treatment means killing all types of human disease organisms which may be found in the pool water, and practically all the harmless kinds of organisms as well. Pool water which is properly supervised is characteristically as low or lower in bacterial count than the community drinking water used to fill the pool.

The chemical agents now most commonly used to disinfect pool water are ozone, ultra-violet light, and chlorine. Of the three, chlorine is by far the most widely used. It has one great advantage over ozone and ultra-violet light in that we may add more than is needed to destroy the bacteria present at a given time, and the excess or residual chlorine will remain for a while and take care of bacteria which may later be added to the water by the users of the pool.

For this reason, chlorine is always used slightly in excess of the actual needs at the time it is added. A residual content of 0.3 to 0.5 of one part of chlorine to a million parts of water should be maintained.

A further advantage of chlorine is that it may be added by hand in emergencies when the chlorine content is found to be too low. Chlorine is now available in small quantities (12 ounces to 4 pounds) in liquid or powder form, and it is possible to treat pool wholly by hand with such preparations. Special mechanical equipment is, however, advisable

* The solution is made by dissolving 1 Gm. of phenolphthalein in 100 cc. of 95 per cent alcohol, and adding enough soda (washing or caustic soda) to maintain a faint but definite pink color, both in the solution itself and also when one drop of it is added to three drops of distilled water. The solution must be kept corked to prevent evaporation of the alcohol, with resulting precipitation of the phenolphthalein. More soda may be added if the color of the solution fades. Phenol red and other indicators have been less satisfactory in our hands and are, besides, not so easily procured and prepared by supervisors lacking the facilities of a chemical laboratory.

in all pools, automatically insuring the addition of suitable amounts of chlorine to the water.

Chlorine works most effectively as a disinfectant in water which is slightly acid, but the comfort of the pool users demands a slightly alkaline condition. This contradictory situation makes it necessary to use slightly more chlorine than we would use if the water were acid in character. We have, therefore, two reasons for constantly checking on the acid-alkaline condition of pool water and maintaining a definite but low alkalinity: to economize on chlorine and to prevent discomfort or injury to pool users.

As already stated, maintaining a relatively small amount of chlorine is sufficient to insure safety, but 0.3 to 0.5 of one part of chlorine to 1,000,000 parts of water is necessary. It is usually taken for granted that chlorine tests are too complicated or too delicate to be done by any but trained chemists. It is, however, quite possible to keep the pool water under control with very simple equipment. The simplest of these tests utilizes a colored standard solution made up to match the color obtained when water containing 0.3 to 0.5 parts of chlorine per million is treated with a special test chemical, orthotolidin.* The yellow-green color which develops with orthotolidin varies with the amount of chlorine present and it is therefore a simple matter to determine whether the chlorine is too high, too low, or wholly lacking. The chlorine tests are preferably made at the pool, because of the volatile character of chlorine and the misleading results which may occur if the sample is collected and tested in a distant laboratory.

A very low chlorine content, as well as a complete absence of chlorine, calls for immediate action; and even where chlorine is continuously added by an automatic pump, it may be desirable to add emergency chlorine "by hand," using chlorinated lime, which may be purchased in blocks or cans.

The recent widespread influence of athlete's foot, plantar wart, *etc.*, makes it advisable to emphasize the necessity of extending our preventive procedures to the pool surroundings. Treating the pool water does not give sufficient protection; we must consider also the locker rooms, dressing booths and pool passageways.

The weight of the body causes very close or intimate contact of the feet with all floor surfaces, and such organisms as the fungus of athlete's foot are readily picked up by feet moist with water or perspiration. Various protective measures are recommended, including the wearing of paper slippers, rubber bathing shoes, *etc.* While all unnecessary contact of the bare feet with floor surfaces should be avoided, the surest method of control involves (1) the use of chemicals in the routine care of floors and (2) the compulsory use of chemical foot-baths by all bathers.

Chlorine preparations for such use (with definite directions) are now

* The orthotolidin solution is prepared by dissolving 1 Gm. of orthotolidin in one liter of 10 per cent hydrochloric acid. A given amount, *e.g.*, 10 drops of orthotolidin solution is added to a 100 cc. sample of pool water. The sample is thoroughly shaken (in a corked bottle or by keeping the palm over the top) and allowed to stand (two minutes) before being compared with the standard. For this comparison good light is essential and a piece of dead-white paper makes a good background.

available; and, while other chemicals are recommended, adherence to the same type of disinfectant for pool and floors avoids the loss of strength which may occur when certain incongruous chemicals are thus brought together. This is especially important in old-style pools without scum gutters and where the pool margins drain directly into the pool.

Foot-baths should be large—large enough to avoid rousing feelings of distaste due to the idea that the bathers are using a common basin, and large enough to make sure that the chemical will not be weakened or vitiated before it is renewed. The best foot-baths are large sunken areas in the floor, for they provide full treatment of the feet as the bather goes from dressing-room to pool and also as he returns.

Complete safety for pool users cannot be assured, however, unless high standards of personal hygiene are maintained. It is quite possible for careless and irresponsible people to cause conditions which the routine care cannot adequately control. Both chlorine and alkali have affinity for organic matter in general, as well as for bacteria; and all pool users should help reduce to a minimum the organic matter being added to the pool in such ways as sneezing, expectorating, or omitting the preliminary cleansing bath. Persons with colds or other communicable diseases should refrain from using the pools, and regulations requiring medical examinations should be recognized as protective measures of benefit to all patrons. Pool attendants can destroy the protective values of swimming sanitation measures by such practices as using the same counters or hampers for both soiled and clean towels and by inadequate care of bathing suits (chlorine rinse; drying temperature).

Constant and careful supervision of all details of the pool and its surroundings is necessary to assure to the users the sanitary control and protection which science now makes possible.

The necessary test materials for alkalinity and chlorine may be secured from Mr. Max Meyer, 76 Willoughby Street, Brooklyn, N. Y., for \$5.00.

Producing a Water Pageant

OLIVE McCORMICK

Marine Adviser—Girl Scouts, Inc.

Water pageants have become a popular means of effectively demonstrating one of the most graceful of the physical arts. The combination of swimming, dancing, and dramatic pantomime, to tell a simple story, offers an opportunity of correlating the work of several departments in clubs, colleges, schools, or communities.

The most successful amateur water pageants are generally simple in structure yet well planned in every detail and carefully organized. A smooth-running, simple performance is more pleasing in effect than a confused, elaborate production. The foundation work is all planned before a cast is selected or rehearsals are begun. Preliminary preparations may include the following steps.

The objective of the water pageant determines the size, elaborateness, and scope of the production. A school or club water pageant, with the



Photograph by Harvey Patterson

primary purpose of presenting the progress of the participants, will necessarily include features to demonstrate this progress of ability. Parts will need to be created for those who do not excel in skill but who can contribute in formations not requiring perfection. A very different type of production, more elaborate in scope, may be fitting if the objective is to publicize or dedicate a pool. It is advisable to solicit the help of outside groups, such as dancing classes, dramatic clubs, music groups, and swimming teams representing various sections of the community in such productions. These contacts help advertise the performance and create interest among a wider range of people.

After determining the objective, a survey should be made of the probable talent to be solicited. The possibilities of scenic effects, available funds for the construction of the stage, and seating arrangements for the audience are next to be considered. A tentative budget is made as plans develop.

Then comes the organization of water pageant committees which will be responsible for publicity (newspapers, radio, posters, and announcements), business (finances, budget, tickets, and programs), stage and scenery (planning, construction, decorating, renting, and borrowing of equipment) and costumes (designing and cutting patterns, making, and arranging for dressing quarters). It is advisable to have the chairman of each of the above committees serve on the general production committee in order to coordinate the duties of all groups. These duties should be carefully outlined and understood in order to avoid duplication or misunderstanding.

The theme of the pageant may be decided by a committee, or the entire scenario may be written by an individual. If a "ready-made" pageant is selected, a careful study should be made of it to consider necessary adaptations. A classic may be rewritten and adapted into an effective water pageant. Inspiration often is found in Greek mythology or in fairy tales. Legendary sea characters—mermaids, Nereids, sea nymphs, and sea monsters—may be woven into exciting themes. A story evolved from the humanizing of land and sea animals and flowers may appeal to the imagination. The theme should be simple in order that the audience may follow it through pantomime actions. Lines cannot be easily heard across water, words of songs are generally not understood, and long explanations are not appreciated by an audience. The story may be presented by a reader between acts or, preferably, it may be distributed in libretto form, either printed or mimeographed.

After the theme is accepted, the setting, major scenes and costumes, are planned. If necessary, a platform may be built over only a few feet of the pool in indoor productions, giving a stage for the land performance. Caves may be constructed of dyed cheesecloth (paper hanger's canvas), with papier mâché rocks made over wire frames, boxes or chairs covered with layers of cheesecloth and newspapers that have been soaked in paper hanger's paste. When dry, they are painted with showcard paints. Cellophane and Christmas tree snow may give that "finished effect." Under-water caves are represented by dropping a pale blue-green curtain of cheesecloth in front of the stage. Under-water growths may be cut from



Paul Parker Photo

large sheets of wrapping paper and cellophane and wired to stand, but allowed slight freedom for swaying as if affected by the motion of the water. The cave, which may have vivid coloring, may contain stalactites and stalagmites, and huge conch shells. This may be a scene for the dancing and land activities, with the pool serving for the water activities. The diving board may be disguised as a part of the cave. Water lilies cut from cardboard and paper, wired and painted and dipped in hot paraffin, may be floated on cork blocks (from lumber yards). Lighting effects are important. Rotating "colored spots" are valuable in creating the atmosphere desired.

For outdoor productions, stages may be set on floats representing islands. Floats may be improvised by lashing a platform above four or six rowboats or canoes. This platform may be anchored in place in front of the audience or may be propelled by gondoliers or pulled by teams of swimmers. Boats are often elaborately decorated to represent pirate ships, Spanish galleons, or Venetian gondolas.

Costumes are important to the extent to which they lend beauty and harmony to the ensemble effect on the stage. Material successfully used is cheesecloth carefully dyed. Often it is starched to give it body. Designs are cut from stiff, shiny paper or cambric and appliquéd on the basic costume. Cellophane, turlatan, and Christmas tinsel on cotton may be used effectively. Leotards or long union suits, dyed or painted, may be used as water costumes or as costumes for kings, princes, and animals.

Swimmers who demonstrate formation swimming and diving, and who therefore need freedom of the body, may have short costumes of yellow cambric painted with black oil paint to represent scales, or black costumes painted with silver paint. The scale design may also be painted on the legs of the swimmers with theatrical paint. Trunks or one-piece suits may be worn under the costume. Fancy designs in headgear of wire with metal spangles, worn over bathing caps, add to the swimmers' costumes.

Carefully selected music contributes greatly to a performance. The music of violin and flute carries well over the water. A chorus may sing or chant the interpretation of the story. Choral reading by a well trained group is also effective. Percussion instruments may be used for the dance rhythms.

The dancing should be interpretive of the theme and should depict the story in pantomime. The talent available will determine the number of leading characters and the extent to which groups will be used.

Swimming formations are effective if executed with precision and counted out with a definite number of strokes to each movement. The abilities of the swimmers should determine the complexity of the formations. It is generally advisable to divide the swimmers into at least two groups, according to swimming ability, and synchronize the formations, giving simple strokes and figures to those less skilled. This will give opportunity for rest—a few combined formations are used to give the effect of a large group, yet the endurance of the individual swimmer is not taxed. Stars, wheels, dance quadrille formations, and stunts are combined into one continuous routine which makes an effective general



Photograph by Ruth Alexander Nichols

scene. Waltz, crawl, and breast strokes are easily timed in rhythm with front and back surface dives. Treading water and face floating add variety to the continuous swimming strokes, and are easily combined into elaborate and pleasing designs.

The amount of solo diving and swimming is dependent upon the skill of the performers. Lighting also adds to the effectiveness of swimming formations.

When the swimming is rehearsed, a slow, easy, swing rhythm should be maintained. Walking through the formations on land as they are counted has been found helpful training. Leaders of each line should keep a careful watch, with each swimmer taking heed of the lines and counts. One swimmer out of place is as serious as a soldier out of step.

In rehearsals, the main characters should rehearse together, and the choruses and swimmers together, with only a few rehearsals of the entire cast. This arrangement makes it unnecessary for the groups to wait around for their turns. Definite rehearsal times should be set and respected by the director and the cast. One dress rehearsal may have to be sufficient, as often the stage cannot be constructed until the day of the performance.

Water pageants are a great satisfaction to put on, fun to be in, and novel entertainment to watch if careful plans are made well in advance and adhered to by all concerned.

REFERENCES

- Water Pageants, Games, and Stunts*, by Olive McCormick (A. S. Barnes and Company, New York).
Swimming Pageants, in Four Series, by Mary A. Brownell (A. S. Barnes and Company, New York).
A Series of Water Pageants (American Red Cross, free upon request).

National Intercollegiate Telegraphic Swimming Meet

SPONSORS FOR 1939

- National Sponsor—Wright Junior College, Chicago, Ill.
 Eastern Region—New Jersey College for Women, New Brunswick, N. J.
 Southern Region—University of Texas, Austin, Tex.
 Central Region—Wright Junior College, Chicago, Ill.
 Western Region—University of California at Los Angeles, Cal.

RESULTS FOR 1938

		<i>East</i>	<i>Central</i>	<i>South</i>	<i>West</i>
1. University of Washington	22 points				22
2. U. of California at L. A.	17 points				17
3. Northwestern University	16½ points			16½	

4.	Wright Junior College	15½ points		15½	
5.	Slippery Rock College	13 points	13		
6.	Wayne University	11½ points		11½	
7.	Skidmore College	10 points	10		
8.	Vassar College	8½ points	8½		
9.	Indiana University	6 points		6	
10.	{ University of Illinois	5 points		5	
	{ Swarthmore College	5 points	5		
	{ Washington State College	4 points			4
11.	{ Washington University	4 points		4	
	{ University of Iowa	4 points		4	
	{ University of Wisconsin	2 points		2	
12.	{ Oregon State College	2 points			2
	{ University of Texas	2 points		2	
13.	{ Rockford College	1 point		1	
	{ Connecticut College	1 point	1		

The Organization of the National Intercollegiate Telegraphic Swimming Meet

See Rule X

ANN AVERY SMITH

Adviser to National Intercollegiate Telegraphic Swimming Meet

The annual National Intercollegiate Telegraphic Swimming Meets have evolved from a genuine interest in and appreciation of proficiency in swimming among university and college women throughout the country. As planned and organized, they give women who enjoy swimming races and who are in good academic standing an opportunity to compete and compare times with other university and college women.

Practices other than those of scrupulous honesty are entirely foreign to the whole idea of competition by communication. Such practices as giving "athletic scholarships" to induce talented swimmers to enroll, and laxness by those in charge in obtaining skilled timers and exact pool measurements are violations against good sportsmanlike conduct and honesty. They cannot be tolerated. It is the function of the National Aquatic Committee to disqualify any college or university which does not value these essentials to fair Telegraphic competition.

Are You a Sportsman?*

1. Do you play the game for the game's sake?
2. Do you play for your team and not for yourself?
3. Do you carry out your captain's orders without question or criticism?
4. Do you accept the umpire's decision absolutely?
5. Do you win without swank and lose without grouching?

* Axioms adopted by the Olympic Congress, Prague, 1925.

6. Would you rather lose than do anything which you are not sure is fair?

DUTIES OF NATIONAL SPONSOR

1. Send letters of invitation together with entry, result, and suggestion blanks to each Regional Sponsor on or before October 25.
2. Send a complete list of colleges entering the meet to each Regional Sponsor before February 15, and instruct each Regional Sponsor to send a copy of this list to each college entering the meet.
3. Notify, by night letter before March 25, the colleges winning the first five places in National competition.
4. Secure from the Chairman of Telegraphic Records her written approval on the result sheets of colleges whose swimmers have set National or Regional records. These should be sent before March 25 and returned approved before March 31.
5. Send any funds remaining in the Treasury to the new National Sponsor.
6. Send copies of Regional Financial Reports to old and new Regional Sponsors on or before May 1.
7. Send to each Regional Sponsor on or before April 5, with instructions to distribute to each college entering the meet:
 - (a) A letter stating the proposed changes in the rules for the following year.
 - (b) A complete list of entries.
 - (c) Complete records of National Major Results (from colleges having 1,000 or over enrollment of women), and National Minor Results (from colleges having less than 1,000 enrollment of women). These results should include:
 - (1) Names of girls winning the first 10 places in each event (although points are won by 5 only).
 - (2) Names of girls winning the first five places, with points awarded.
 - (3) The total number of points received by each college and by each Region.
 - (d) The National and Regional Intercollegiate Records and record holders.
 - (1) The long course records for pools of 75 or more feet long.
 - (2) The short course records for pools under 75 feet, but not less than 60 feet.
 - (e) Any other material which may be thought of interest.
8. Send a complete report of the year's meet to the adviser to the National Intercollegiate Telegraphic Swimming Meet of the National Aquatic Committee on or before May 1. This report should include a list of entries, the complete National and Major and Minor Results, the National Collegiate Records approved by the Chairman of the Records Committee, the National and Regional Financial Reports, suggestions for revisions in the rules (from practical suggestions and plans for the meet of the coming year).

9. Send a complete report and all records and material to the new National Sponsor on or before May 15. This report should include all correspondence, form letters, copies of telegrams sent out, blanks used in conducting the meet with suggested revisions, copies of Certificates of Swimming Pool Length, and any suggestions which might prove helpful in conducting the next year's meet.
10. Send old reports of the year preceding to the adviser to the National Intercollegiate Telegraphic Swimming Meet of the National Aquatic Committee to be kept on permanent file.

DUTIES OF REGIONAL SPONSORS

EACH REGIONAL SPONSOR SHALL:

General Procedures

1. Send entry blanks and invitations to enter the meet to all colleges and universities in her region.
2. Send to all colleges entering the meet in her region:
 - (a) Two copies of the blanks for recording results.
 - (b) A complete list of colleges entering the meet in the region (on or before February 15).
 - (c) Request for certificates of pool length from any college not having one on file.
 - (d) A copy of Regional and National Major results and Minor results (not later than March 25).
 - (c) *If requested* by any college, a Regional and National Financial Report (which Regional Sponsors receive from National Sponsors before May 1).
3. Send to the National Sponsor:
 - (a) \$1.00 of entry fee paid by each college and a complete list of colleges entering the meet (on or before February 15).
 - (b) Certificate of swimming pool length for each college which does not have one on file (not later than March 18).
 - (c) Original copy of result sheets from each college in her region.
 - (d) Tabulation of Major Results.
 - (e) Tabulation of Minor Results.
 - (f) Names of girls winning first 10 places in each event.
 - (g) Names of girls winning first 5 places, with points awarded.
 - (h) Suggested changes in rules and procedures.
4. Notify by night letter the colleges winning the first 5 places in her region (not later than March 15).
5. Send new Regional Sponsor a complete report of the year's meet (on or before May 1). The report should include: a list of colleges to which invitations were sent, all correspondence, form letters, copies of telegrams, entry blanks, result blanks, certificates of pool length, and any suggestions which might prove helpful in conducting the next year's meet.
6. Send old report from the year preceding to the adviser to the National Intercollegiate Telegraphic Swimming Meet of the National Aquatic Committee.

History in Outline of the Annual National Intercollegiate Telegraphic Swimming Meet

Compiled by Ann Avery Smith, Wayne University, Detroit, Michigan

YEAR	SPONSOR	WINNER
1930	University of Illinois University of Illinois	Northwestern University University of Illinois
1931		
1932	University of Wisconsin University of Wisconsin	University of Illinois University of Illinois
1933		
1933	University of Pittsburgh	University of Pittsburgh

"Big Ten" Telegraphic Swimming Meet

University of Illinois
University of Illinois

Middle Western Intercollegiate Telegraphic Swimming Meet

University of Wisconsin
University of Wisconsin

Eastern Intercollegiate Telegraphic Swimming Meet

University of Pittsburgh

YEAR	NATIONAL SPONSOR	COLLEGES ENTERING	REGIONAL SPONSORS	NATIONAL	REGIONAL
1st 1934	Univ. of Illinois	9 Eastern 7 Southern 21 Central 8 Western	Univ. of Pittsburgh Univ. of Texas Univ. of Illinois Univ. of California, Los Angeles	Penn Hall	Penn Hall Florida State College for Women Wayne Univ. Univ. of California, Los Angeles

45 Total

OFFICIAL AQUATIC GUIDE

2nd 1935	Univ. of Illinois	9 <i>Eastern</i> 10 <i>Southern</i> 16 <i>Central</i> 11 <i>Western</i> — 46 Total	Penn Hall Florida State College for Women University of Illinois University of California, Los Angeles	Wayne Univ. Connecticut College Oklahoma A. & M. College Wayne Univ. Redlands Univ.
3rd 1936	Wayne Univ.	8 <i>Eastern</i> 7 <i>Southern</i> 21 <i>Central</i> 9 <i>Western</i> — 45 Total	Swarthmore College Oklahoma A. & M. College Wayne University College of Puget Sound	Northwestern Univ. Connecticut College Florida State College for Women Northwestern Univ. Univ. of Washington
4th 1937	Northwestern Univ.	6 <i>Eastern</i> 4 <i>Southern</i> 24 <i>Central</i> 10 <i>Western</i> — 44 Total	Slippery Rock Teachers College University of Georgia Northwestern University University of Washington	Connecticut College Oklahoma A. & M. College Northwestern Univ. Univ. of California, Los Angeles
5th 1938	Mundelein College	13 <i>Eastern</i> 10 <i>Southern</i> 24 <i>Central</i> 6 <i>Western</i> — 53 Total	Connecticut College Univ. of Alabama Mundelein College Montana State U.	Vassar Univ. of Texas Northwestern Univ. Univ. of Washington (Seattle)

Colleges Entering the Telegraphic Swimming Meet

1938

CENTRAL REGION

Barat College, Lake Forest, Ill.
Beloit College, Beloit, Wis.
Butler University, Indianapolis, Ind.
Carleton College, Northfield, Minn.
Colorado State College, Fort Collins, Colo.
De Pauw University, Greencastle, Ind.
Indiana University, Bloomington, Ind.
Michigan State Normal, Ypsilanti, Mich.
Mundelein College, Chicago, Ill.
Northwestern University, Evanston, Ill.
Oberlin College, Oberlin, Ohio
Rockford College, Rockford, Ill.
University of Chicago, Chicago, Ill.
University of Colorado, Boulder, Colo.
University of Illinois, Urbana, Ill.
University of Iowa, Iowa City, Iowa
University of Kansas, Lawrence, Kans.
University of Minnesota, Minneapolis, Minn.
University of Missouri, Columbia, Mo.
University of Nebraska, Lincoln, Nebr.
University of Wisconsin, Madison, Wis.
Washington University, St. Louis, Mo.
Wayne University, Detroit, Mich.
Wright Junior College, Chicago, Ill.

EASTERN REGION

Connecticut College, New London, Conn.
Cornell University, Ithaca, N. Y.
Hunter College, New York, N. Y.
Massachusetts State College, Amherst, Mass.
New Jersey College, New Brunswick, N. J.
Skidmore College, Saratoga Springs, N. Y.
State Teachers College, Slippery Rock, Pa.
Swarthmore College, Swarthmore, Pa.
Temple University, Philadelphia, Pa.
University of Pennsylvania, Philadelphia, Pa.
William and Mary College, Williamsburg, Va.
Wells College, Aurora, N. Y.
West Virginia University, Morgantown, W. Va.

SOUTHERN REGION

Duke University, Durham, N. C.
Fredericksburg State Teachers College, Fredericksburg, Va.

Morehead State Teachers College, Morehead, Ky.
Oklahoma A. & M. College, Stillwater, Okla.
State Teachers College, Farmville, Va.
Texas State College for Women, Denton, Tex.
University of Alabama, University, Ala.
University of Georgia, Athens, Ga.
University of Oklahoma, Norman, Okla.
University of Texas, Austin, Tex.

WESTERN REGION

Montana State College, Bozeman, Mont.
Montana State University, Missoula, Mont.
Oregon State College, Corvallis, Ore.
University of Redlands, Redlands, Calif.
University of Washington, Seattle, Wash.
Washington State College, Pullman, Wash.

Colleges Entering the Telegraphic Swimming Meets

1930-1937

CENTRAL REGION

Carleton College, Northfield, Minn.
Christian College, Columbia, Mo.
Colorado State College, Fort Collins, Colo.
Cornell College, Mt. Vernon, Iowa
Grinnell College, Grinnell, Iowa
Kansas State College, Manhattan, Kans.
University of Cincinnati, Cincinnati, Ohio
University of Iowa, Iowa City, Iowa
University of Kansas, Lawrence, Kans.
University of Minnesota, Minneapolis, Minn.
University of Missouri, Columbia, Mo.
University of Nebraska, Lincoln, Nebr.
University of Wichita, Wichita, Kans.
Washburn College, Topeka, Kans.
Washington University, St. Louis, Mo.

EASTERN REGION

Connecticut College for Women, New London, Conn.
State Teachers College, Indiana, Pa.
New Jersey College for Women, New Brunswick, N. J.
Penn Hall, Chambersburg, Pa.
Skidmore College, Saratoga Springs, N. Y.
State Teachers College, Slippery Rock, Pa.
Swarthmore College, Swarthmore, Pa.
Temple University, Philadelphia, Pa.

University of Pennsylvania, Philadelphia, Pa.
University of Pittsburgh, Pittsburgh, Pa.
Vassar College, Poughkeepsie, N. Y.

MID-WEST REGION

Battle Creek College, Battle Creek, Mich.
Beloit College, Beloit, Wis.
Butler University, Indianapolis, Ind.
Chicago Normal College, Chicago, Ill.
De Pauw University, Greencastle, Ind.
Earlham College, Richmond, Ind.
Eureka College, Eureka, Ill.
Herzl Junior College, Chicago, Ill.
Illinois State Normal College, Normal, Ill.
Lake Erie College, Painesville, Ohio
Marquette University, Milwaukee, Wisc.
Michigan State College, East Lansing, Mich.
Morton Junior College, Cicero, Ill.
Mundelein College, Chicago, Ill.
Northwestern University, Evanston, Ill.
Ohio State University, Columbus, Ohio
Rockford College, Rockford, Ill.
Shrimer Junior College, Mount Carroll, Ill.
South Side Junior College, Chicago, Ill.
University of Chicago, Chicago, Ill.
University of Illinois, Urbana, Ill.
University of Indiana, Bloomington, Ind.
University of Michigan, Ann Arbor, Mich.
University of Wisconsin, Madison, Wis.
Wayne University, Detroit, Mich.
West Virginia University, Morgantown, W. Va.
Wilson Junior College, Chicago, Ill.
Wittenburg College, Springfield, Ill.
Wright Junior College, Chicago, Ill.

NORTHWEST REGION

College of Puget Sound, Tacoma, Wash.
Montana State University, Missoula, Mont.
Oregon State College, Corvallis, Ore.
University of Oregon, Eugene, Ore.
University of Washington, Seattle, Wash.
Washington State College, Pullman, Wash.

SOUTHERN REGION

Centenary College of Louisiana, Shreveport, La.
Florida State College for Women, Tallahassee, Fla.
Mississippi State College for Women, Columbus, Miss.
Morehead State Teachers College, Morehead, Ky.

Oklahoma A. and M. College, Stillwater, Okla.
 Oklahoma State College for Women, Chickasha, Okla.
 Southern Methodist University, Dallas, Tex.
 Texas State College for Women, Denton, Tex.
 University of Alabama, University, Ala.
 University of Georgia, Athens, Ga.
 University of Oklahoma, Norman, Okla.
 University of Texas, Austin, Tex.
 William and Mary College, Williamsburg, Va.
 Winthrop College, Rock Hill, S. C.
 Women's College of North Carolina, Greensboro, N. C.

SOUTHWEST REGION

Mills College, Oakland, Calif.
 Occidental College, Los Angeles, Calif.
 Redlands University, Redlands, Calif.
 University of California, Berkeley, Calif.
 University of California, Los Angeles, Calif.
 University of Utah, Salt Lake City, Utah
 Utah State Agricultural College, Logan, Utah

1938 National Intercollegiate Swimming Records (Long Course)

(Pools 75 feet and over in length)

NATIONAL RECORDS

Event	College	Name	Time	Date
40 yd. Crawl	Univ. of Alabama	Margaret Beery	21.5"	1934
50 yd. Crawl	Univ. of Alabama	Dorothy Calvin	27.9"	1934
100 yd. Crawl	Univ. of Redlands	Marion Garnsey	1:07.0"	1935
40 yd. Back	Wayne Univ.	Astrid Johannesen	26.6"	1936
50 yd. Back	Univ. of Illinois	Mary Cady	36.6"	1934
100 yd. Back	Wayne Univ.	Astrid Johannesen	1:16.5"	1936
40 yd. Breast	Penn Hall	Mary Louise Miller	29.4"	1934
	Wayne Univ.	Doris Shimman	29.4"	1934
50 yd. Breast	Univ. of Illinois	Jane Fauntz	38.5"	1931
100 yd. Breast	Wayne Univ.	Doris Shimman	1:26.5"	1934
75 yd. Medley Relay	Wayne Univ.	Astrid Johannesen Marian Petrequin Joyce Pulleyblank	47.1"	1937
100 yd. Free Style Relay	U. C. L. A. *	Peggy Thomas Louise Hannah Laurette Clair Dorothea Smithson	57.3"	1937

* U. C. L. A.—University of California at Los Angeles.

EASTERN REGION RECORDS

Event		College	Name	Time	Date
40 yd.	Crawl	Skidmore College	Gertrude Pullman	22.0"	1938
100 yd.	Crawl	Vassar College	Jean Booth	1:06.0"	1938
40 yd.	Back	Vassar College	Jean Booth	28.2"	1938
100 yd.	Back	Penn Hall	Louise Van Anglen	1:21.0"	1934
40 yd.	Breast	Penn Hall	Mary Louise Miller	29.4"	1934
100 yd.	Breast	Penn Hall	Mary Louise Miller	1:30.0"	1934
75 yd.	Medley Relay	Vassar College	Janet Ferguson Ruth Grace Jean Booth	58.8"	1938
100 yd.	Free Style Relay	Vassar College	Jean Booth Alice Howe Janet Ferguson Hulda Rhodes	1:00.0"	1938

SOUTHERN REGION RECORDS

40 yd.	Crawl	Univ. of Alabama	Margaret Beery	21.5"	1934
50 yd.	Crawl	Univ. of Alabama	Dorothy Calvin	27.9"	1934
100 yd.	Crawl	Florida State Col.	Florence Ward	1:10.2"	1936
40 yd.	Back	Florida State Col.	Martha Makemson	29.1"	1935
100 yd.	Back	Florida State Col.	Marion Weeks	1:29.8"	1935
40 yd.	Breast	Univ. of Alabama	Frances Leonard	29.9"	1934
100 yd.	Breast	Florida State Col.	Mildred Stevens	1:43.2"	1935
75 yd.	Medley Relay	Texas State College	Christine Wagner Jeannette McCreary Edith Thomas	58.2"	1938
100 yd.	Free Style Relay	Texas State College	Ruth Aechternacht Ernestine Clark Lorena Hall Edith Thomas	1:01.8"	1938

CENTRAL REGION RECORDS

40 yd.	Crawl	Wayne Univ.	Doris Shimman	22.3"	1934
50 yd.	Crawl	Univ. of Illinois	Bernice Rice	30.1"	1930
100 yd.	Crawl	Wayne Univ.	Joyce Pulleyblank	1:07.3"	1937
40 yd.	Back	Wayne Univ.	Astrid Johannesen	26.6"	1936
50 yd.	Back	Univ. of Illinois	Mary Cady	36.6"	1934
100 yd.	Back	Wayne Univ.	Astrid Johannesen	1:16.5"	1936
40 yd.	Breast	Wayne Univ.	Doris Shimman	29.4"	1934
50 yd.	Breast	Univ. of Illinois	Jane Fauntz	38.5"	1931
100 yd.	Breast	Wayne Univ.	Doris Shimman	1:26.5"	1934

Event		College	Name	Time	Date
75 yd.	Medley Relay	Wayne Univ.	Astrid Johannesen Marian Petrequin Joyce Pulleyblank	47.1"	1937
100 yd.	Free Style Relay	Wayne Univ.	Marian Petrequin Ruth Heilman Phyllis Beard	57.9"	1938

WESTERN REGION RECORDS

40 yd.	Crawl	U. of Washington	Betty Lea	22.4"	1938
100 yd.	Crawl	U. of Washington	Betty Lea	1:06.3"	1938
40 yd.	Back	U. C. L. A. *	Billie Steitz	26.0"	1938
100 yd.	Back	U. C. L. A. *	Billie Steitz	1:14.4"	1938
40 yd.	Breast	U. C. L. A. *	Gertrude Wagner	31.6"	1936
100 yd.	Breast	U. C. L. A. *	Gertrude Wagner	1:32.1"	1937
75 yd.	Medley Relay	U. C. L. A. * Tie	Aurora Kipperberg Francis Bigham Antoinette Mahneke	50.2"	1937
			Billie Steitz Gertrude Wagner Kato Invi		1938
100 yd.	Free Style Relay	U. of Washington	Betty Lea Mervel Taber Jean Kalinski Irma Schoennaw	55.4"	1938

Approved—

ANN AVERY SMITH

*Chairman of Records**National Aquatic Committee*

1938 National Intercollegiate Swimming Records (Short Course)

(Pools under 75 feet but not less than 60 feet)

NATIONAL RECORDS

Event		College	Name	Time	Date
40 yd.	Crawl	Northwestern U.	Claudia Eckert	21.9"	1936
100 yd.	Crawl	Northwestern U.	Claudia Eckert	1:01.3"	1936
40 yd.	Back	Univ. of Chicago	Marjorie I. Smith	24.9"	1936
100 yd.	Back	Univ. of Chicago	Marjorie I. Smith	1:11.6"	1936

* U. C. L. A.—University of California at Los Angeles.

OFFICIAL AQUATIC GUIDE

Event		College	Name	Time	Date
40 yd.	Breast	Northwestern U.	Crystal Diete	28.9"	1937
100 yd.	Breast	Northwestern U.	Crystal Diete	1:21.8"	1937
60 yd.	Medley Relay	Northwestern U.	Evelyn Bennett Crystal Diete Josephine Park	36.9"	1937
80 yd.	Free Style Relay	Swarthmore Col.	Marian Snyder Myra Williams Virginia Mayer Jean Maguire	43.0"	1938

EASTERN REGION RECORDS

40 yd.	Crawl	Skidmore College	Gertrude Pullman	22.0"	1938
100 yd.	Crawl	Swarthmore Col.	Nathalie Irvine	1:10.0"	1935
40 yd.	Back	Skidmore College	Gertrude Pullman	28.4"	1938
100 yd.	Back	Slippery Rock Teachers College	Shirley Butler	1:23.8"	1938
40 yd.	Breast	Connecticut Col.	Jean Cadwell	29.1"	1936
100 yd.	Breast	Connecticut Col.	Jean Cadwell	1:23.2"	1936
60 yd.	Medley Relay	Slippery Rock Teachers College	Shirley Butler Eleanor Cattrell Mary Elizabeth Jackson	38.4"	1938
80 yd.	Free Style Relay	Swarthmore Col.	Marion Snyder Myra Williams Virginia Mayer Jean Maguire	43.0"	1938

SOUTHERN REGION RECORDS

40 yd.	Crawl	Univ. of Georgia	Virginia Andrews	23.4"	1936
100 yd.	Crawl	Univ. of Georgia	Virginia Andrews	1:11.2"	1936
40 yd.	Back	Oklahoma A. & M. College	Helen Leverich	27.8"	1937
100 yd.	Back	Oklahoma A. & M. College	Helen Leverich	1:20.6"	1937
40 yd.	Breast	Univ. of Georgia	Woodville Campbell	30.4"	1936
100 yd.	Breast	Univ. of Georgia	Woodville Campbell	1:26.1"	1936
60 yd.	Medley	No Record			
80 yd.	Free Style Relay	Univ. of Oklahoma	Martha Gassett Dorothy Nell Penner Maxine Richardson Lurline Kraft	53.0"	1938

CENTRAL REGION RECORDS

Event		College	Name	Time	Date
40 yd.	Crawl	Northwestern U.	Claudia Eckert	21.9"	1936
100 yd.	Crawl	Northwestern U.	Claudia Eckert	1:01.3"	1936
40 yd.	Back	Univ. of Chicago	Marjorie I. Smith	24.9"	1936
100 yd.	Back	Univ. of Chicago	Marjorie I. Smith	1:11.6"	1936
40 yd.	Breast	Northwestern U.	Crystal Diete	28.9"	1937
100 yd.	Breast	Northwestern U.	Crystal Diete	1:21.8"	1937
60 yd.	Medley Relay	Northwestern U.	Evelyn Bennett Crystal Diete Josephine Park	36.9"	1937
80 yd.	Free Style Relay	Northwestern U.	Marian Hallenstein Helen Osberg Josephine Park	44.2"	1937

WESTERN REGION RECORDS

40 yd.	Crawl	Univ. of Oregon	Olive Lewis	25.7"	1936
100 yd.	Crawl	Univ. of Oregon	Olive Lewis	1:17.2"	1936
40 yd.	Back	Univ. of Oregon	Dorothy Jounberg*	30.1"	1936
100 yd.	Back	Univ. of Utah	Coralee Ansell	1:26.0"	1937
40 yd.	Breast	Colorado State Col.	Margaret Crisswell*	34.4"	1936
100 yd.	Breast	Montana State U.	Mary E. Sandford	1:38.6"	1938
60 yd.	Medley	Montana State U.	Alice Rice Mary Sandford Andrea Newsome	44.2"	1938
80 yd.	Free Style	Montana State U.	Harriett Coburn Ruth Harrison Catherine Lou Parkins Andrea Newsome	50.2"	1938

* Marion Garnsey, Redlands University, made faster times for these events in 1937 in a pool measuring 59 feet 7 $\frac{3}{4}$ inches. However, her time could not be accepted as records.

Approved—

ANN AVERY SMITH
Chairman of Records
National Aquatic Committee

Selected List of Recent Books

- Altmann, G. J., and Drew, Gwendolyn—Units of Activity in Swimming and Life Saving. G. J. Altmann and Gwendolyn Drew, Kent, Ohio, 1935, pp. 44, mimeo., \$.75.
- Amateur Swimming Association of England—Manual on Diving. Simpkin, Marshall, Ltd., 4, Stationers' Hall Court, London, E. C., 1937, pp. 229, 2s. 6d.
- , Swimming Instruction. Simpkin, Marshall, Ltd., 4, Stationers' Hall Court, London, E. C., re-written 1937, pp. 64, 1s.
- American Red Cross—Life Saving and Water Safety. P. Blakiston's Son & Co., Inc., 1012 Walnut St., Philadelphia, 1937, pp. 267, \$.60.
- , Swimming and Diving. P. Blakiston's Son & Co., Inc., 1012 Walnut St., Philadelphia, 1938, pp. 271, \$.60.
- Boy Scouts of America—Swimming, Water Sports and Safety. Boy Scouts of America, 4th ed., 1938.
- Chicago Park District, V. F. Herlund, editor—Diving. Chicago Park District, Washington Park, Chicago, 1937, pp. 96, \$.35.
- Collins, Gilbert—Newest Swimming. William Heinemann, Ltd., 99 Great Russell St., London, W. C. 1, 1937, 3s. 6d.
- Cox, Norman—Natural Laws of Speed Swimming. Thomas F. Cox, 921 Pacific St., Vancouver, B. C., 1933, pp. 53, \$1.
- Greenwood, Frances A.—Swimming—A Bibliography. H. W. Wilson Company. To be published soon.
- Herbert, P. W. A.—Foundations of Modern Springboard Diving. The Swimming Times, 4 Waddon Park Ave., Croydon, London, 1936, pp. 36, 1s.
- Hobden, F. W.—Art of Springboard Diving. Putnam & Co., Ltd., 42 Great Russell St., London, W. C. 1, 1937, pp. 229, 10s. 6d.
- Howeroft, W. J.—Swimming and Water Polo. Charles Scribner's Sons, 597 Fifth Ave., New York, \$2; P. Allan, London, 1936, 5s.
- Lawson, Victor—Swimming. J. B. Lippincott Company, East Washington Square, Philadelphia, 1937, pp. 82, \$1.50.
- Lowman, C. L., Roen, Susan, Aust, Ruth and Paull, Helen—Technique of Underwater Gymnastics. American Publications, Inc., 527 West Seventh St., Los Angeles, 1937, \$5.
- Mann, Matt, and Fries, Charles C.—Swimming. Prentice-Hall. To be published soon.
- Reichart, Natalie, and Brauns, Jeanette—Swimming Workbook, a Manual for Students. A. S. Barnes & Co., 67 West 44th St., New York, 1937, \$1.
- Smith, James R.—Intercollegiate Diving and Rapid Computator Score Book. Interscholastic Sports Publishing Company, Route 2, Box 22, Anaheim, Calif., 1938, \$1.
- , Intercollegiate Swimming Score Book. Interscholastic Sports Publishing Company, Route 2, Box 22, Anaheim, Calif., 1938, \$1.
- , Interscholastic Diving and Rapid Computator Score Book. Inter-

- scholastic Sports Publishing Company, Route 2, Box 22, Anaheim, Calif., 1938, \$1.
- , Interscholastic Swimming Score Book. Interscholastic Sports Publishing Company, Route 2, Box 22, Anaheim, Calif., 1938, \$1.
- , Playing and Coaching Water Polo. Interscholastic Sports Publishing Company, Route 2, Box 22, Anaheim, Calif., 1938, \$2.50.
- Smith, Sanderson—Swimming Is Fun. William Morrow & Co., Inc., 386 Fourth Ave., New York, 1936, pp. 229, \$2.
- Spencer, Carrie E., compiler—Official Report of the National Women's Aquatic Forum. Carrie E. Spencer, Ohio University, Athens, Ohio, 1937, mimeo., \$.50.
- Surf Life Saving Association of Australia—Surf Life Saving Handbook. New South Wales Sports Club, Ltd., Sydney, New South Wales, Australia, rev. 1938, pp. 192, 1s.
- Venner, R. C.—Swimming for All. George Bell and Sons, Ltd., York House, 6 Portugal St., Lincoln's Inn Fields, London, W. C. 2, 1937, pp. 136, 2s.
- Whitford, H. G.—Swimming for Everyone. Freeport Printing Company, Freeport, Ill., 1935, pp. 60, cloth \$1.50; pa. \$1.

Magazines

- Baths and Bath Engineering.* The official journal of the National Association of Bath Superintendents, 30 and 31 Furnival St., Holborn, London, E. C. 4. Available in the United States through Frances A. Greenwood, University, Alabama. Annual subscription, \$3.
- Beach and Pool*, 425 Fourth Ave., New York, N. Y. Annual subscription, \$2.
- The Swimming Times*, 4 Waddon Park Ave., Croydon, London. Available in the United States through Frances A. Greenwood, University, Alabama. Annual subscription, \$1.50.

Selected List of Films

Compiled by FRANCES A. GREENWOOD

- Aquatic Artistry, Prices on request. Metro-Goldwyn-Mayer, 1540 Broadway, New York, N. Y.
- Backstroke, Japanese and American, 1931 and 1932. Film library, Payne Whitney Gymnasium, Yale University, New Haven, Conn.
- Breaststroke, Showing Conventional, Butterfly and Dolphin Strokes. (Producer: R. J. H. Kiphuth.) Film Library, Payne Whitney Gymnasium, Yale University, New Haven, Conn.
- Call of the Olympic Bell. Free except for transportation charges. German Railroads Information Office, 665 Fifth Ave., New York, N. Y.
- Diving by Degener, Kurtz and Samaika Taken at the Memorial Pool, Honolulu. (Producer: R. J. H. Kiphuth.) Film Library, Payne Whitney Gymnasium, Yale University, New Haven, Conn.

Diving Instruction Film. (Producer: V. F. Hernalund.) Sale price \$20. Not for rent. Slow motion. V. F. Hernalund, Supervisor, Physical Activities, Chicago Park District, Washington Park, Chicago, Ill.

Gangway. \$1 per day. Kodascope Libraries, Inc., 33 West 42nd St., New York, N. Y.

Scene of small yachts racing; canoeing scenes; the sailing racing canoe is illustrated.

Hawaiian Shores. \$5 per day. Burton Holmes Films, Inc., 7510 North Ashland Ave., Chicago, Ill.

Fishing at night with torch and spear. The Black Sands of Kalapana.

Highlights of the 1936 Olympics. \$3 per day. Films Incorporated, 330 West 42nd St., New York, N. Y.

Formal ceremonies—massed parade of the athletes—the torch bearer from Greece—exciting action from all important fields—swimming and rowing events.

Men's and Women's Diving and Water Polo. Rental fee \$10 for series of six films. American Olympic Committee, 233 Broadway, New York, N. Y.

Men's and Women's Swimming. Rental fee \$10 for series of six films. American Olympic Committee, 233 Broadway, New York, N. Y.

Men's Platform Diving. (Producer: American Olympic Committee.) \$4. American Olympic Committee, 233 Broadway, New York, N. Y.

Men's Springboard Diving. \$4. American Olympic Committee, 233 Broadway, New York, N. Y.

Men's Swimming and Water Polo. \$4. American Olympic Committee, 233 Broadway, New York, N. Y.

Outboard Stunting. \$1.50 per day. Eastin 16mm. Pictures, 506 Putnam Bldg., Davenport, Iowa.

Poetry of Motion and Olympic Diving Champions. Rental price on request. Sale \$30 to \$50 less school discount. Walter O. Gutlohn, Inc., 35 West 45th St., New York, N. Y. Prices on request. Ideal Pictures Corporation, 30 East 8th St., Chicago, Ill.

Athletes in all forms of sports; perfect form in diving.

Surfing—the Famous Sport of Waikiki. Rental \$1 per day. Sale \$24. Bell and Howell Company, 1801 Larchmont Ave., Chicago, Ill. Rental \$1.50. Sale \$5 to \$20. Burton Holmes Films, Inc., 7510 North Ashland Ave., Chicago, Ill.

BOATING, CANOEING AND SAILING

Floating Fun. Rental prices on request. Sale \$30 to \$50. Walter O. Gutlohn, Inc., 35 West 45th St., New York, N. Y. Rent \$1.50 to \$2.50. Ideal Pictures Corporation, 30 East 8th St., Chicago, Ill.

Sailing and motor boating.

Nipigon Trails. Price \$10.65. Canadian Government Motion Picture Bureau, Ottawa, Ontario, Canada.

A picturesque canoe trip down the Nipigon River, showing the shooting of rapids and the wild scenery of that section of Canada.

Surf and Sail. Prices on request. Kodascope Libraries, Inc., 33 West 42nd St., New York, N. Y.

Motor boat racing and sail boating.

Voyageur Trails. Price—loan. American Museum of Natural History, 77th St. and Central Park West, New York, N. Y. Price—transportation charges. National Council of Young Men's Christian Associations, Motion Picture Bureau, 347 Madison Ave., New York, N. Y.

"An interesting pictorial film of a present-day Canadian canoeing and fishing trip in which the trails of Samuel de Champlain, the Recollect Fathers, and other early Voyageurs are retraced."

Certificate of Swimming Pool Length

Date.....

School or College.....Address.....

This is to certify that the.....pool in which the
Telegraphic Meets will be held has been measured by me with a steel
tape at the water's edge and measures exactly..... feet..... inches
in length, and that the take-off ledge is in a perpendicular line with the
end of the pool at the water's edge.

Signed.....
Engineer or Surveyor

Application for Intercollegiate or Interscholastic Record

ANN AVERY SMITH Date of application.....193.....

Chairman of Records, National Aquatic Committee
Wayne University, Detroit, Michigan

The undersigned officials hereby attest to the record-breaking performance of the applicant and certify that the National Intercollegiate Telegraphic Swimming Meet Rules were strictly adhered to.

Applicant School or College

Event Time achieved.....

Intramural

Competition *Intercollegiate* Held at..... Date of meet.....

Telegraphic

Name of pool..... Actual measurement of pool.....

(Engineer's certificate attesting measurement of pool must accompany application unless already filed.
See form for submitting Certificate of Pool Length.)

Signatures:

Referee Starter

Judges Timers Time.....

..... Time.....

..... Time.....

No application will be considered unless made in the foregoing form.

The National Section on Women's Athletics

A SERVICE ORGANIZATION—FOR YOU

This Statement Prepared by ELINOR M. SCHROEDER, *Past Chairman*

THE National Section on Women's Athletics includes in its membership those women members of the American Association for Health, Physical Education and Recreation who are interested in athletics. Of this large number, over 700 take an active part in the work of the Section, serving as Officers, as Board Members, as Committee Chairmen, as State Representatives, as members of various committees, and in certain other special capacities. Coordinating the work of these many individuals and groups is the Legislative Board, an elected body operating under the Section's Constitution. Lists of certain of the workers for the N.S.W.A. will be found in following pages of this *Guide*.

Brief Summary of the Work of the N.S.W.A.

The central goal of the Section is to *promote sound and diversified programs of athletics which are centered upon the interests and welfare of the participants*. It seeks to reach this goal by rendering practical aid of various types to teachers and leaders who are in direct contact with girls and women who participate in athletic activities. The main divisions under which these service activities are classified are stated briefly below.

1. **Official Publications**—The *Athletic Guides*, *Service Bulletin*, and the various *Special Publications* cover a wide range of sports and also problems of organization and guidance of activity programs. All of these publications sell at modest prices, and are kept up-to-date by frequent editing and re-issues.
2. **Revision and Interpretation of Official Rules for Women's Sports**—together with
3. **Testing, Rating, and Guidance of Officials**, constitute a continuous service of the Section's 14 sports sub-committees under the Rules and Editorial Chairman.
4. **Convention and Conference Programs**—At five District and one National Convention annually the Section offers special sessions devoted to discussion of significant problems, demonstrations, exhibits, etc. *Special Athletic Conferences* are also held at stated times, and local and state meetings are covered by State Representatives.
5. **Statement and Interpretation of Standards**—The application of accepted standards to actual activity situations is a continuous and important phase of the work.
6. **Local Contacts and Services**—These are provided through the State Representatives and their State Committees who study local needs and render "on call" service. Committee Chairmen and other national workers also service individual needs on request.
7. **Study of Special Problems**—Several Special Committees center their work on the study of problems referred by local groups, as well as upon major problems related to the organization and guidance of athletics. These studies are frequently published as "Special Publications" of the Section.
8. **Articles in Periodicals**—National and state professional publications carry various articles submitted through the activities of the Section; a monthly *News Column* appears in the *Journal of Health, Physical Education and Recreation*; articles of general interest to the layman are submitted to certain popular magazines.

Sources of Information or Service

Inquiries should be addressed to chairmen of committees into whose fields of work the respective inquiries fall. Service agencies are listed below.

Motion Picture Committee—Studies film production and uses; reviews sports films; advises amateurs; publishes bibliographies; answers inquiries, Chairman: Mrs. Louise S. Kjellstrom, 3200 16th St., N.W., Washington, D. C.

Program Content Committee—Makes various special studies (see Publications Flier); now working with Standards Committee in applications of standards to typical situations. Acting Chairman: Elinor M. Schroeder, Wellesley College, Wellesley, Mass.

Publicity Committee—Arranges convention exhibits; has old-style costumes for rental; sponsors Journal News Column; now making special study of publicity. Chairman: Mary E. Korn, West Technical High School, Cleveland, Ohio.

Research Committee—Undertakes special studies; advises on study problems; issues Test and Sports Bibliographies; cooperates with Research Section of A.A.H.P.E.R. Chairman: Dr. Elizabeth Rodgers, State Teachers College, La Crosse, Wisconsin.

Standards—States and interprets standards for women's athletics; is now undertaking applications of standards to typical school situations; answers inquiries on local problems. Chairman: Violet Boynton, Ohio State University, Columbus, Ohio.

Sports (Rules, Officiating, Techniques, etc.)—See Rules and Editorial Committee, page 6 of this Guide, and address respective sub-chairman or Marjorie Hillas.

Local Problems—write STATE REPRESENTATIVE, see list on page 7 of this Guide.

Publications Service—Information on Special Publications should be addressed to Chairman: Ruth Atwell, George Washington University, Washington, D. C. Secure special flier from Chairman, or from State Representative.

Order Publications—

Athletic Guides—from local bookstore, or A. S. BARNES & Co., 67 W. 44th St., New York.

Service Bulletin—from ALICE FRYMIR, 511 West 113th St., New York City (\$1.00).

Special Publications—from ELIZABETH NOYES, office of A.A.H.P.E.R., National Education Association Bldg., 1201 16th St., N.W., Washington, D. C.

Send News Items to Editor N.S.W.A. *News Column*, Rachel Benton, De Pauw University, Greencastle, Indiana. Items on current happenings are cordially welcomed.

Inquiries Not Classified as Above May Be Addressed to Chairman of N.S.W.A.

LEGISLATIVE BOARD PERSONNEL, 1938-39

National Section on Women's Athletics

EXECUTIVE COMMITTEE

(See note below on manner of election of these officers) TERM EXPIRES

<i>Section Chairman</i>	
JANE SHURMER, Chico State College, Chico, California.....	1940
<i>Vice Chairman</i>	
HAZEL J. CUBBERLEY, Univ. of California at L. A., Los Angeles, Cal.....	1939
<i>Past Chairman</i>	
ELINOR M. SCHROEDER, Wellesley College, Wellesley, Massachusetts.....	1940
<i>Chairman Rules and Editorial Committee</i>	
MARJORIE HILLAS, Teachers College, Columbia Univ., New York City.....	1939
<i>Secretary</i>	
DONNIE COTTERAL, State Teachers College, Denton, Texas.....	1939
<i>Treasurer</i>	
Mrs. EMILY P. MACKINNON, 1211 Locust St., Philadelphia, Pennsylvania.....	1939
<i>Members-at-Large from Legislative Board</i>	
KATHERINE CRONIN, Univ. of Wisconsin, Madison, Wisconsin.....	1939
AMY HOWLAND, Public Schools, 10 N. Fulton Ave., Mt. Vernon, N. Y.....	1939
<i>Note: N.S.W.A. Chairman elected at national convention, 2-year term; Past Chairman and Rules and Editorial Chairman are ex-officio members; all others elected by the Legislative Board from its own number.</i>	

LEGISLATIVE BOARD

<i>Chairman</i>	
JANE SHURMER, Chico State College, Chico, California.....	1940
<i>District Chairmen</i>	
<i>(Elected by respective Districts, two-year terms)</i>	
<i>Eastern</i>	
AMY HOWLAND, 10 North Fulton Ave., Mt. Vernon, New York.....	1939
<i>Midwest</i>	
GRACE GRIFFIN, West Virginia Univ., Morgantown, West Virginia.....	1939
<i>Central</i>	
EDNA WILLIS, Univ. of Colorado, Boulder, Colorado.....	1939
<i>Southern</i>	
MARY B. SETTLE, State College for Women, Tallahassee, Fla.....	1939
<i>Southwest</i>	
HAZEL J. CUBBERLEY, Univ. of Cal. at L. A., Los Angeles, Cal.....	1939
<i>Northwest</i>	
JEANNETTE BRAUNS, Oregon State College, Corvallis, Oregon.....	1941

Members-at-Large

(Elected at national conventions, three-year staggered terms)

IRIS BOULTON, New Trier Township High School, Winnetka, Illinois.....	1939
DONNIE COTTERAL, State Teachers College, Denton, Texas.....	1939
KATHERINE CRONIN, University of Wisconsin, Madison, Wisconsin.....	1940
WILHELMINE E. MEISSNER, Bayside High School, Bayside, L. I., New York.....	1941
ELIZABETH YEEND MEYERS, School of Education, New York Univ., New York City.....	1941
GRACE STAFFORD, Central Branch, Y.W.C.A., Chicago, Illinois.....	1940

Advisory Members

(Elected by the Board itself, three-year staggered terms)

LAURENTINE B. COLLINS, Board of Education, 467 W. Hancock St., Detroit, Mich.....	1941
LEAH GREGG, University of Texas, Austin, Texas.....	1939
GRACE E. JONES, Summit High School, Summit, New Jersey.....	1939
Dr. CLARE KING, Skidmore College, Saratoga Springs, New York.....	1940
EMILY P. MACKINNON, 1211 Locust St., Philadelphia, Pa.....	1940
Dr. EDNA SCHERICK, Oberlin College, Oberlin, Ohio.....	1941

N.A.A.F. Members

(Elected by N.A.A.F., for one-year term)

MARJORIE CAMP, State University of Iowa, Iowa City, Iowa.....	1939
ANNE F. HODGKINS, 18 Gramercy Park South, New York City.....	1939

Women's Rules and Editorial Committee

A Standing Committee of the National Section on Women's Athletics

COMMITTEE LIST JULY 1, 1938

	TERM OF OFFICE
<i>General Chairman</i>	
MARJORIE HILLAS, 525 West 120th Street, New York City.....	1937-1939
<i>Editorial Representative</i>	
ALICE FRYMIR, 511 West 113th Street, New York City.....	1936-1939
<i>Treasurer</i>	
EMILY MACKINNON, 1211 Locust Street, Philadelphia, Pa.....	1936-1939
<i>N.S.W.A. Chairman</i>	
JANE SHURMER, State Teachers College, Chico, Cal.....	1938-1940
<i>Canadian Representative</i>	
DOROTHY TINGLEY, 2219 Garnet Street, Regina, Saskatchewan, Canada.....	1938-1940
<i>Athletic Games</i>	
BERTIE HAMMOND, 1701 S. Baltimore Street, Tulsa, Okla.....	1938-1939
<i>Baseball</i>	
ELLEN MOSBECK, University of Iowa, Iowa City, Iowa.....	1938-1940
<i>Basketball</i>	
CHRISTINE WHITE, Woman's College, University of North Carolina, Greensboro, N. C.....	1938-1940
<i>Field Hockey</i>	
ELIZABETH YEEND MEYERS, New York University, Washington Square, New York City.....	1938-1940
<i>Individual Sports</i>	
MARGARET FITCH NEWPORT, Mills College, Cal.....	1938-1940
<i>Lacrosse</i>	
JENNY TURNBULL, 1870 Wyoming Ave., Washington, D. C.....	1938-1940
<i>Officials Rating</i>	
DOROTHY TAPLEY, Goucher College, Baltimore, Md.....	1937-1939
<i>Riding</i>	
PHYLLIS VAN VLEET, Western Reserve University, Cleveland, Ohio.....	1937-1939
<i>Soccer</i>	
DOROTHY ZIMMERMAN, 5631 North 29th Street, Omaha, Neb.....	1937-1939
<i>Speed Ball</i>	
RACHEL BENTON, De Pauw University, Greencastle, Ind.....	1938-1940
<i>Track and Field</i>	
ALICE SCHRIVER, Washington University, St. Louis, Mo.....	1937-1939
<i>Volleyball</i>	
ROSALIE ALLEN, Y.W.C.A., Hartford, Conn.....	1937-1939
<i>Water Sports</i>	
FRANCES GREENWOOD, University of Alabama, University, Ala.....	1937-1939
<i>Outing Clubs and Winter Activities</i>	
BARBARA JOY, 311 North Capitol Street, Iowa City, Ia.....	1937-1939

DISTRICT CHAIRMEN AND STATE REPRESENTATIVES, 1938-39**East**

- District Chairman:* AMY HOWLAND, 10 North Fulton Ave., Mt. Vernon, N. Y.
- CONNECTICUT.....Katherine E. Colton, Teachers College, New Britain.
 DELAWARE.....Beatrice E. Long, 202 N. Rodney St., Wilmington.
 D. C.....Ruth Atwell, Dept. P. E. for Women, George Washington Univ., Washington
 MARYLAND.....Marie Parker, Western Maryland College, Westminster.
 MASSACHUSETTS.....Sally Biggane, Watertown High School, Watertown.
 MAINE.....Marjorie Morrell, Cony High School, Augusta.
 NEW HAMPSHIRE.....Viola Pfommer, Colby Junior College, New London.
 NEW JERSEY.....Dorothy Duke, Montclair State Teachers College, Upper Montclair.
 NEW YORK.....Bertha Bennett, State Teachers College, New Paltz.
 PENNSYLVANIA.....Helen Barton, State Teachers College, Clarion.
 RHODE ISLAND.....Bessie Rudd, Dept. of Phys. Ed., Pembroke College, Providence.
 VERMONT.....Janice Carlin, University of Vermont, Burlington.

Central

- District Chairman:* EDNA WILLIS, University of Colorado, Boulder, Colo.
- COLORADO.....Hannah Praxl, State Teachers College, Gunnison.
 IOWA.....Ruth Lautenbach, Simpson College, Indianola.
 KANSAS.....Helen Saum, Kansas State College of Agriculture, Manhattan.
 MINNESOTA.....Margaret G. Fox, State Teachers College, Duluth.
 MISSOURI.....Alice Schriver, Dept. P. E. for Women, Washington University, St. Louis.
 NEBRASKA.....Dorothy Zimmerman, 5631 North 29th St., Omaha.
 NORTH DAKOTA.....Phyllis Jack, University of North Dakota, Grand Forks.
 SOUTH DAKOTA.....Gladys Leonard, Dept. P. E. for Women, University of South Dakota, Vermillion.
 WYOMING.....Elsie Michalke, Midwest, Wyoming.

Midwest

- District Chairman:* GRACE GRIFFIN, Univ. of West Virginia, Morgantown
- ILLINOIS.....Evelyn Bielefeldt, Knox College, Galesburg.
 INDIANA.....(to be appointed)
 MICHIGAN.....Dorothy Parker, Michigan State College, East Lansing.
 OHIO.....Harriet Fitchpatrick, Board of Education, Cleveland.
 WEST VIRGINIA.....Marjorie Bartlett, Shepherdstown State Teachers College, Shepherdstown.
 WISCONSIN.....Margaret Meyer, Lathrop Hall, Madison.

Southwest

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Standards in Athletics for Girls and Women

The following statements comprise the officially adopted *Standards* of the National Section on Women's Athletics. The discussion and interpretation of these statements will be found in the Monograph: *Standards in Athletics for Girls and Women*. Reference concerning purchase of this Monograph will be found on inside front cover of guide.

FUNDAMENTAL STANDARD

The one purpose of Athletics is the good of those who play

THE PROGRAM: The program must be based upon a profound knowledge of the individual and of the environment in which she lives.

The construction of the program of athletic activities must be based upon a knowledge of the elements of individual differences, which are age, physique, interests, abilities, experience, health, and stage of physiological, emotional and social maturity.

Athletic activities must be selected and classified on the basis of the best current scientific evidence and in terms of the many interrelated factors entering into play.

Selection of activities must be based upon an awareness of these three aspects: 1st, the analysis of activities from simple to complex; 2nd, the classification of individuals in ability from novice to expert; and 3rd, in terms of present and future use.

Each community must be studied to use, to improve, and to increase the available places for wholesome play.

Wise conduct of the athletic program must make provision for every player to lead in accordance with her merit and skill in leading, and to follow according to her willingness and ability to adapt herself to others and to a common end.

Wise conduct of the athletic program must provide for a continuous challenge to the ingenuity, organizing powers, and powers of appraisal of every player.

The acquisition of skill must be promoted by using a wide variety of sound and effective methods, employed always as a means to the end.

Participation in athletics must depend upon a comprehensive and reliable evaluation of the health status of the participant; and upon a classification of fitness which takes into account the quality and extent of participation as well as the type of activity, and individual differences as well as general organic normality.

Special restrictions upon participation, such as playing during the menstrual period, must be determined by individual differences, with conservatism the rule in the absence of final evidence.

The program must be scheduled to conform to an optimum plan of regular play periods of limited length and at frequent intervals, held outdoors whenever possible, and at times of day when vital energy is at high level and when interference with a hygienic regimen is not entailed.

The element of competition, present in all organized group play, must be made to function as the fundamental constructive factor in the athletic program.

Provision must be made in equal terms for all players to participate and to compete in terms of actual ability and maximum expertness.

The method of organizing competition must be determined by the desirable possibilities it provides, not by the types into which it may be classified.

The official in a contest must measure up to all of the qualifications set up for leadership—her exercise of authority must be sound, consistent, and expert.

The official rules authorized by the National Section on Women's Athletics of the American Association for Health, Physical Education and Recreation must be used.

The athletic program must progressively educate the participant away from the need for artificial incentives and tangible awards.

THE LEADER: Leadership, to be constructive, must be sound, expert, and consistent.

The administrator as a leader must be responsible for the realization of the purposes for which the whole athletic program is conducted.

The administrator as a leader must ensure the accomplishment of his purposes by the selection of properly qualified teachers, and by the honest delegation of authority to them.

The administrator as a leader must provide and supervise a physical setting for athletics which conforms to the educational character of the activities.

The administrator as a leader must act as the final authority over important phases of the athletic program, such as health safeguards, degree and type of competition, and method of financing.

The administrator as a leader must be responsible for reflecting in public relations accompanying an athletic program the character and purpose of that program.

The teacher as a leader must herself exemplify those traits—physical, mental, emotional, and social—which she seeks through her teaching to inculcate in others.

THE PARTICIPANT: The participant must assume responsibility for the consequences of her own behavior.

The participant must develop the desire and habit of playing in terms of her individual needs and interests.

The participant must take increasing responsibility for her own health.

The participant must equip herself with a variety of skills sufficient to provide for both present and future satisfaction.

The participant must learn to engage in competition wisely, and as a means to enjoyment.

Every participant must consider herself a cooperating member of her group, and also regard herself as a potential leader.

join—

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